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**UNITED STATES DISTRICT COURT  
NORTHERN DISTRICT OF CALIFORNIA**

**BERLIN BROTHERS VALLEY SCHOOL  
DISTRICT,**

**Plaintiff,**

**v.**

**META PLATFORMS, INC.; FACEBOOK  
HOLDINGS, LLC; FACEBOOK  
OPERATIONS, LLC; META  
PLATFORMS TECHNOLOGIES, LLC;  
META PAYMENTS, INC.; INSTAGRAM,  
LLC; SICULUS, INC.; SNAP, INC.;  
TIKTOK, INC.; BYTEDANCE INC.;  
ALPHABET, INC.; GOOGLE, LLC; XXVI  
HOLDINGS, INC.; WHATSAPP, INC.;  
and YOUTUBE, LLC.,**

**Defendants.**

**Case No.:**

**COMPLAINT**

- 1. PUBLIC NUISANCE**
- 2. NEGLIGENCE**
- 3. GROSS NEGLIGENCE**
- 4. RICO**
- 5. CONSPIRACY TO CONDUCT THE  
AFFAIRS OF THE ENTERPRISE  
THROUGH A PATTERN OF  
RACKETEERING ACTIVITY (18  
U.S.C. § 1962)**

**JURY TRIAL DEMANDED**

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## COMPLAINT

### I. INTRODUCTION

#### A. Defendants' Role in the Youth Mental Health Crisis

1. American youth are facing possibly the most severe mental health crisis in history. Along with the benefits of the rise of technology, also comes serious consequences. The major social media platforms, including Facebook, Snapchat, Instagram, TikTok and YouTube, have spent millions to develop and market their products to minors, keeping them coming back for more, and significantly contributing to this mental health crisis.

2. Meta Platforms, Inc.; Facebook Holdings, LLC; Facebook Operations, LLC; Meta Payments Inc.; Meta Platforms Technologies, LLC; Instagram, LLC; Siculus, Inc.; Snap Inc.; TikTok Inc.; ByteDance Inc.; Alphabet Inc.; Google LLC; XXVI Holdings Inc.; WhatsApp, Inc.; and YouTube, LLC (hereinafter, "Defendants") design, market, promote, and operate social media platforms. Over the past decade, each has grown their respective platforms exponentially, from millions to billions of users. Defendants have not only increased their users, but also enhanced the frequency of use of their platforms. Across the country, including in Plaintiff's district, the youth mental health crisis has seen a sharp increase due to excessive use of Defendants' platforms. More minors are struggling with their mental health than ever before, with suicide now the second leading cause of death for American minors.

3. Defendants have engaged in the aforementioned acts for profit. Their business models are based on advertisements. Defendants' users expend more time using Defendant's platforms, allowing Defendants to sell more advertisements and increase their profits exponentially.

4. Minors are central to Defendants’ business models. Minors are more likely than not to have access to a cell phone through which they gain access to social media. As one Defendant put it, “los[ing] the teen foothold in the U.S.[.]” would mean “los[ing] the pipeline” for growth.<sup>1</sup>

5. Defendants have maximized the time users—particularly minors—spend on their platforms by purposely designing, refining, and operating them to exploit the neurophysiology of the brain’s reward systems to ensure users come back frequently and remain on the respective platforms for as much time as possible.

6. Minors are particularly susceptible to Defendants’ manipulative conduct in that their brains are not fully developed. Consequently, the minors lack the same emotional maturity, impulse control, and psychological resiliency as adult users.

7. Defendants have successfully exploited the vulnerable brains of minors, causing millions of students across the United States, including in Plaintiff’s district, to become addicted to and excessively using Defendants’ social media platforms. Furthermore, the content that the Defendants direct to minors is many times harmful and exploitive (e.g., instigating vandalism, or encouraging eating disorders or self-harm).

8. Defendants’ misconduct is a substantial factor resulting in a youth mental health crisis, which has been marked by increasingly higher proportions of minors struggling with anxiety, depression, thoughts of self-harm, and suicidal ideation.

9. The state of children’s mental health led the American Academy of Pediatrics, the American Academy of Child and Adolescent Psychiatry, and the Children’s Hospital Association to declare a national emergency, and the children’s mental health crisis has led the U.S. Surgeon

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<sup>1</sup> Sheera Frenkel *et al.*, *Instagram Struggles with Fears of Losing Its ‘Pipeline’: Young Users*, N.Y. Times (Oct. 26, 2021), <https://www.nytimes.com/2021/10/16/technology/instagram-teens.html>.

General to issue an advisory “to highlight the urgent need to address the nation’s youth mental health crisis.”<sup>2</sup>

10. The Centers for Disease Control and Prevention (“CDC”) highlighted this crisis in its most recent bi-annual Youth Risk Behavior Survey report, which evidences a steady and then accelerated increase in almost every category of risk between 2011 and 2021. The survey found that there was an increased use and popularity of YouTube, TikTok, and Snap Defendants’ platforms during that same time period. The findings set forth in the report are that although the pandemic added to stressors for depression from isolation, the crisis pre-existed the pandemic. Use of YouTube, TikTok, and Snap Defendants’ platforms also increased during the pandemic. Dr. Victor Fornari, the vice chair of child and adolescent psychiatry for Northwell Health, which is New York’s largest health system, argues that there is “no question” of an association between the use of social media and the dramatic increase in suicidal behavior and depressive mood.<sup>3</sup>

11. Defendants’ algorithms perpetuate content that is harmful to children. “Kids are now vulnerable to cyberbullying and critical comments, like ‘I hate you’, ‘Nobody likes you’... It’s like harpoons to their heart every time.”<sup>4</sup>

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<sup>2</sup> AAP-AACAP-CHA Declaration of a National Emergency in Child and Adolescent Mental Health, Am. Acad. Pediatrics (Oct. 19, 2021), available at <https://www.aap.org/en/advocacy/child-and-adolescent-healthy-mental-development/aap-aacap-cha-declaration-of-a-national-emergency-in-child-and-adolescent-mental-health/>; U.S. Surgeon General Issues Advisory on Youth Mental Health Crisis Further Exposed by COVID-19 Pandemic, U.S. Dep’t Health & Hum. Servs. (Dec. 6, 2021), available at <https://www.hhs.gov/sites/default/files/surgeon-general-youth-mental-health-advisory.pdf>.

<sup>3</sup> Azeen Ghorayshi & Roni Caryn Rabin, *Teen Girls Report Record Levels of Sadness*, C.D.C. Finds, The New York Times (Feb. 13, 2023), available at <https://www.nytimes.com/2023/02/13/health/teen-girls-sadness-suicide-violence.html> (last visited Mar. 20, 2023).

<sup>4</sup> *Id.*

12. Defendants’ social media platforms produce an even greater burden on an already strained system as the youth mental health crisis continues getting worse, and Defendants’ continue to profit. “We don’t have enough therapists to care for all these kids.”<sup>5</sup> In fact, the number of teens and adolescents waiting in the emergency room for mental health treatment for suicide nationwide has tripled from 2019 to 2021.<sup>6</sup>

13. President Joe Biden has also called attention to the harm social media has wrought on youth and implored all to “hold social media platforms accountable for the national experiment they’re conducting on our children for profit.”<sup>7</sup>

14. Minors in Plaintiff’s school, and others, are experiencing a similar health crisis as observed nationally.

15. Students that experience anxiety, depression, and other mental health issues perform worse in school, are less likely to attend school, more likely to engage in substance abuse, and to act out, all of which directly affects Plaintiff’s ability to function.

16. That is why 96 percent of school districts, including Plaintiff, provide mental health services to its students. But Plaintiff requires a comprehensive, long-term plan along with funding to drive a sustained reduction and abatement of the mental health crisis its minors are experiencing caused by Defendants.

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<sup>5</sup> *Id.*

<sup>6</sup> Stephen Stock, *Children Languish in Emergency Rooms Awaiting Mental Health Care*, CBS News (Feb. 27, 2023), available at <https://www.cbsnews.com/news/emergency-rooms-children-mental-health/> (last visited Mar. 30, 2023).

<sup>7</sup> President Biden, State of the Union Address (Mar. 1, 2022) (transcript available at <https://www.whitehouse.gov/state-of-the-union-2022/>).



## II. JURISDICTION AND VENUE

17. The Court has subject-matter jurisdiction over this case under 18 U.S.C. § 1964 and 28 U.S.C. § 1331 because the amount in controversy exceeds \$75,000, and because this action arises, in part, under the Racketeer Influenced and Corrupt Organizations Act (“RICO”).

18. The Court has personal jurisdiction over Defendants because they engage in business in the Northern District of California and in the designated District Court set forth herein and have sufficient minimum contacts with the Districts. Defendants intentionally availed themselves of the markets in this State through deceptive and misleading promotion, marketing, and operations of their platforms at issue in this lawsuit in California and Pennsylvania, and by retaining significant profits and proceeds from these activities, to tender the exercise of jurisdiction by this Court permissible under the United States Constitution.

19. Venue is appropriate in the Northern District of California pursuant to 28 U.S.C. § 1391 because Defendants have engaged in substantial business operations and marketing in this District; because Defendants entered into relevant transactions and received substantial ill-gotten gains and profits from consumers who reside in this District.

20. In addition, Plaintiff reside in and were harmed by Defendants’ conduct in the Western District of Pennsylvania, and a substantial part of the events, acts and omissions giving rise to this action occurred in this District. Pursuant to Paragraph II(D) of Case Management Order No. 4 entered in In Re: Social Media Adolescent Addition/Personal Injury Products Liability Litigation, Case No. 4:22-MD-03047-YGR (MDL No. 3047), Plaintiff designates the Western District of Pennsylvania as the federal district court in which the within Complaint should be deemed to have been filed.

### **III. PARTIES**

#### **A. Plaintiff**

21. Plaintiff Berlin Brothersvalley School District (“Plaintiff” or “School District”) is a school district serving approximately 722 students and is comprised of three (3) schools spanning grades kindergarten through 12<sup>th</sup> grade, consisting of one (1) elementary school, one (1) middle school, and one (1) high school. Berlin Brothersvalley School District is located in Somerset County, Pennsylvania, with a population of approximately 5,444 residents.

22. Plaintiff alleges that Defendants’ design, advertising, marketing, and operation of their social media platforms and products target minors, and that these platforms are intentionally and deliberately designed to exploit and cause minors to become addicted, which has caused the harm to Plaintiff alleged herein.

#### **B. Defendants**

##### **1. Facebook and Instagram Defendants**

23. Defendant Meta Platforms, Inc. (“Meta”), formerly known as Facebook, Inc., is a Delaware corporation with its principal place of business in Menlo Park, California.

24. Defendant Meta develops and maintains social media platforms, communication platforms, and electronic devices that are widely available to users throughout the United States. The platforms developed and maintained by Meta include Facebook (including its self-titled app, Marketplace, and Workplace), Messenger (including Messenger Kids), Instagram, WhatsApp and a line of electronic virtual reality devices and services called Meta Quest (collectively, “Meta platforms”).

25. Meta transacts or has transacted business in this District and throughout the United States. At all times material to this Complaint, acting alone or in concert with its subsidiaries

(identified below), Meta has advertised, marketed, and distributed the Meta platforms to consumers throughout the United States. At all times material to this Complaint, Meta formulated, directed, controlled, had the authority to control, or participated in the acts and practices set forth in this Complaint.

26. Meta's subsidiaries include Facebook Holdings, LLC; Facebook Operations, LLC; Meta Payments Inc.; Meta Platforms Technologies, LLC; Instagram, LLC; WhatsApp, Inc. and Siculus, Inc.

27. Defendants Facebook Holdings, LLC ("Facebook Holdings") was organized under the laws of the state of Delaware on March 11, 2020, and is a wholly owned subsidiary of Meta Platforms, Inc. Facebook Holdings is primarily a holding company for entities involved in Meta's supporting and international endeavors, and its principal place of business is in Menlo Park, California. Defendant Meta is the sole member of Facebook Holdings.

28. Defendant Facebook Operations, LLC ("Facebook Operations") was organized under the laws of the state of Delaware on January 8, 2012, and is a wholly owned subsidiary of Meta Platforms, Inc. The principal place of business of Facebook Operations is in Menlo Park, California. Defendant Meta is the sole member of Facebook Operations.

29. Defendant Meta Payments Inc. ("Meta Payments") was incorporated in Florida on December 10, 2010, as Facebook Payments Inc. In July 2022, the entity's name was amended to Meta Payments Inc. Meta Payments is a wholly owned subsidiary of Meta Platforms, Inc. Meta Payments manages, secures, and processes payments made through Meta, among other activities, and its principal place of business is in Menlo Park, California.

30. Defendant Meta Platforms Technologies, LLC ("Meta Platforms Technologies") was organized under the laws of the state of Delaware as "Oculus VR, LLC" on March 21, 2014,

and acquired by Meta on March 25, 2014. Oculus VR, LLC subsequently changed its name to “Facebook Technologies, LLC” on April 26, 2021, and then from “Facebook Technologies, LLC” to “Meta Platforms Technologies, LLC” on April 26, 2022. Meta Platforms Technologies develops Meta’s virtual and augmented reality technology, such as the Meta Quest line of services, among other technologies related to Meta’s platforms, and its principal place of business is in Menlo Park, California. Defendant Meta is the sole member of Meta Platforms Technologies.

31. Defendant Instagram, LLC (“Instagram”) was founded by Kevin Systrom and Mike Krieger in October 2010 and is a social media platform designed for photo and video sharing. In April 2012, Meta purchased the company for approximately \$1 billion. Meta reformed the limited liability company under the laws of the state of Delaware on April 7, 2012, and the company’s principal place of business is in Menlo Park, California. Defendant Meta is the sole member of Instagram.

32. Defendant Siculus, Inc. (“Siculus”) was incorporated in Delaware on October 19, 2011. Siculus is a wholly owned subsidiary of Meta, which supports Meta platforms by constructing data facilities and other projects. Siculus’s principal place of business is in Menlo Park, California.

33. Defendant WhatsApp Inc. (“WhatsApp”) was founded by Brian Acton and Jan Koum in February 2009. WhatsApp is an instant messaging (“IM”) and voice-over-IP (“VoIP”) app. In February 2014, Meta purchased the company for \$19 billion. WhatsApp was incorporated under the laws of the state of Delaware on February 14, 2014, and the company’s principal place of business is in Menlo Park, California. Defendant Meta is the sole member of WhatsApp.

## 2. Snap Defendant

34. Defendant Snap Inc. (“Snap”) is a Delaware corporation with its principal place of business in Santa Monica, California. Snap transacts or has transacted business in this District and throughout the United States. At all times material to this Complaint, acting alone or in concert with others, Snap has developed, advertised, marketed, and distributed the Snapchat social media platform to consumers throughout the United States. At all times material to this Complaint, Snap formulated, directed, controlled, had the authority to control, or participated in the acts and practices set forth herein.

### 3. TikTok Defendants

35. Defendant TikTok Inc. (“TikTok”) is a social media platform owned by the Chinese company, ByteDance Inc. TikTok was incorporated in California on April 30, 2015, with its principal place of business in Culver City, California. TikTok transacts or has transacted business in this District and throughout the United States. At all times material to this Complaint, acting alone or in concert with others, TikTok has advertised, marketed, and distributed the TikTok social media platform to consumers throughout the United States. At all times material to this Complaint, acting alone or in concert with ByteDance Ltd, TikTok formulated, directed, controlled, had the authority to control, or participated in the acts and practices set forth in this Complaint.

36. Defendant ByteDance Inc. (“ByteDance”) is a Chinese company that has incorporated in Delaware, with its principal place of business in Mountain View, California. ByteDance transacts or has transacted business in this District and throughout the United States. At all times material to this Complaint, acting alone or in concert with others, ByteDance has advertised, marketed, and distributed the TikTok social media platform to consumers throughout the United States. At all times material to this Complaint, acting alone or in concert with TikTok,

ByteDance formulated, directed, controlled, had the authority to control, or participated in the acts and practices set forth in this Complaint.

4. YouTube Defendants (Alphabet Inc., XXVI Holdings, Google, and YouTube)

37. Defendant Alphabet Inc. (“Alphabet”) is a Delaware corporation with its principal place of business in Mountain View, California. Alphabet is the sole stockholder of XXVI Holdings Inc.

38. Defendant XXVI Holdings Inc. (“XXVI Holdings”) is a Delaware corporation with its principal place of business in Mountain View, California. XXVI Holdings is a wholly owned subsidiary of Alphabet and the managing member of Google LLC (“Google”).

39. Defendant Google is a limited liability company organized under the laws of the state of Delaware, and its principal place of business is in Mountain View, California. Google is a wholly owned subsidiary of XXVI Holdings and the managing member of YouTube. Google transacts or has transacted business in this District and throughout the United States. At all times material to this Complaint, acting alone or in concert with others, Google has advertised, marketed, and distributed its YouTube video sharing platform to consumers throughout the United States. At all times material to this Complaint, acting alone or in concert with Defendant YouTube, LLC (“YouTube”), Google formulated, directed, controlled, had the authority to control, or participated in the acts and practices set forth in this Complaint.

40. Defendant YouTube is a limited liability company organized under the laws of the state of Delaware, and its principal place of business is in San Bruno, California. YouTube is a wholly owned subsidiary of Google. YouTube transacts or has transacted business in this District and throughout the United States. At all times material to this Complaint, acting alone or in concert with Defendant Google, YouTube has advertised, marketed, and distributed its YouTube social

media platform to consumers throughout the United States. At all times material to this Complaint, acting alone or in concert with Google, YouTube formulated, directed, controlled, had the authority to control, or participated in the acts and practices set forth in this Complaint.

#### IV. FACTUAL ALLEGATIONS

##### A. Millions of Minors Have Become Addicted to Social Media

41. According to a Harvard University study, the effect social media has on the brain exploits “the same neural circuitry” as “gambling and recreational drugs to keep consumers using their products as much as possible.”<sup>8</sup>

42. As described at length herein, each Defendant designed and marketed their exploitive social media platform to be extremely popular among minors. Ninety percent of children ages 13-17 use social media.<sup>9</sup> Younger children also regularly use social media. One study reported 38 percent of children ages 8-12 used social media in 2021.<sup>10</sup> Other studies reveal numbers as high as 49 percent of children ages 10-12 use social media, and 32 percent of children ages 7-9 use social media.<sup>11</sup>

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<sup>8</sup>Addiction Center, *Social Media Addiction*, <https://www.addictioncenter.com/drugs/social-media-addiction/> (last visited Mar. 30, 2022).

<sup>9</sup> *Social Media and Teens*, Am. Acad. Child & Adolescent Psychiatry (Mar. 2018), 23, *available at* [https://www.aacap.org/AACAP/Families\\_and\\_Youth/Facts\\_for\\_Families/FFF-Guide/Social-Media-and-Teens-100.aspx](https://www.aacap.org/AACAP/Families_and_Youth/Facts_for_Families/FFF-Guide/Social-Media-and-Teens-100.aspx). (last visited Mar. 30, 2023).

<sup>10</sup> Victoria Rideout et al., *The Common Sense Census: Media Use by Tweens and Teens*, 2021 at 5, Common Sense Media (2022), *available at* [https://www.commonsensemedia.org/sites/default/files/research/report/8-18-census-integrated-report-final-web\\_0.pdf](https://www.commonsensemedia.org/sites/default/files/research/report/8-18-census-integrated-report-final-web_0.pdf). (last visited Mar. 30, 2023).

<sup>11</sup> *Sharing Too Soon? Children and Social Media Apps*, C.S. Mott Child.’s Hosp. Univ. Mich. Health (Oct. 18, 2021), *available at* <https://mottpoll.org/reports/sharing-too-soon-children-and-social-media-apps>.

43. The most popular of these platforms is YouTube. 95 percent of children ages 13-17 have used YouTube.<sup>12</sup>

44. As of July 2020, “TikTok classified more than a third of its 49 million daily users in the United States as being 14 years old or younger[,]” and that figure likely underestimates those under 14 and older teenagers (i.e., those between 15 and 18 years old) because TikTok claims not to know how old a third of its daily users are.<sup>13</sup> TikTok is now the second most popular social media platform with over 67 percent of children ages 13-17 having used the app.<sup>14</sup>

45. Instagram also is wildly popular amongst minors, with 62 percent of children ages 13-17 reporting they have used the platform.<sup>15</sup>

46. Snapchat also is popular with minors, with 59 percent of children ages 13-17 reporting they have used the platform.<sup>16</sup>

47. Facebook is among the five most popular social media platforms, with 32 percent of children ages 13-17 reporting they have used the Facebook platform.<sup>17</sup>

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<sup>12</sup> Emily Vogels et al., *Teens, Social Media and Technology 2022*, Pew Rsch. Ctr. (Aug. 10, 2022), available at <https://www.pewresearch.org/internet/2022/08/10/teens-social-media-and-technology-2022/>.

<sup>13</sup> Raymond Zhong & Sheera Frenkel, *A Third of TikTok’s U.S. Users May Be 14 or Under, Raising Safety Questions*, N.Y. Times (Sept. 17, 2020), available at <https://www.nytimes.com/2020/08/14/technology/tiktok-underage-users-ftc.html>.

<sup>14</sup> 12 Emily Vogels et al., *Teens, Social Media and Technology 2022*, Pew Rsch. Ctr. (Aug. 10, 2022), available at <https://www.pewresearch.org/internet/2022/08/10/teens-social-media-and-technology-2022/>.

<sup>15</sup> *Id.*

<sup>16</sup> *Id.*

<sup>17</sup> *Id.*



48. Teenagers who use these social media platforms are also likely to use them every day. One study estimates that 62 percent of children ages 13-18 use social media every day.<sup>18</sup> An increasing number of younger children also use social media daily with 18 percent of children ages 8-12 reporting using a social media site at least once a day.<sup>19</sup>

49. In fact, another study found that some teenagers never stop looking at social media.<sup>20</sup>

50. Almost 20 percent of teens use YouTube almost constantly.<sup>21</sup> TikTok and Snapchat are close behind, with near constant use rates among teens at 16 percent and 15 percent respectively.<sup>22</sup> Meanwhile, 10 percent of teens use Instagram almost constantly.<sup>23</sup> And two percent of teens report using Facebook almost constantly.<sup>24</sup>

51. Teenagers are aware of the hold social media has on their lives, but they cannot stop using it. Thirty-six percent of teenagers admit they spend too much time on social media.<sup>25</sup>

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<sup>18</sup> Victoria Rideout et al., *The Common Sense Census: Media Use by Tweens and Teens*, 2021 at 4, Common Sense Media (2022), available at [https://www.commonsensemedia.org/sites/default/files/research/report/8-18-census-integrated-report-final-web\\_0.pdf](https://www.commonsensemedia.org/sites/default/files/research/report/8-18-census-integrated-report-final-web_0.pdf).

<sup>19</sup> *Id.* At 5.

<sup>20</sup> Emily Vogels et al., *Teens, Social Media and Technology 2022*, Pew Rsch. Ctr. (Aug. 10, 2022), available at <https://www.pewresearch.org/internet/2022/08/10/teens-social-media-and-technology-2022/>.

<sup>21</sup> *Id.*

<sup>22</sup> *Id.*

<sup>23</sup> *Id.*

<sup>24</sup> *Id.*

<sup>25</sup> *Id.*

And over half of teens say that giving up social media would be somewhat hard, with nearly one-in-five teens saying giving up social media would be very hard.<sup>26</sup> And of the subgroup of teenagers who use at least one platform “almost constantly,” 71 percent said giving up social media would be hard, with 32 percent saying giving up social media would be very hard.<sup>27</sup>

52. Due to the excessive overuse of Defendants’ platforms, minors become accustomed to and even addicted to checking them. Teenagers who characterize themselves as spending too much time on social media are almost twice as likely to say that giving up social media would be hard compared to teens who see their social media usage as about right.<sup>28</sup>

53. Another study shows that among teenagers who regularly use social media, 32 percent “wouldn’t want to live without” YouTube.<sup>29</sup> Twenty percent of teenagers said the same about Snapchat; 13 percent said the same about both TikTok and Instagram; and 6 percent said the same about Facebook.<sup>30</sup>

54. Despite using social media frequently, most minors do not enjoy it. In a study conducted using data collected since 2015, only 27 percent of boys and 42 percent of girls ages 8-18 reported enjoying social media “a lot” in 2021.<sup>31</sup>

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<sup>26</sup> *Id.*

<sup>27</sup> *Id.*

<sup>28</sup> *Id.*

<sup>29</sup> Victoria Rideout *et al.*, *Common Sense Census: Media use by tweens and teens, 2021* at 31, Common Sense Media (2022), 00.

<sup>30</sup> *Id.*

<sup>31</sup> *Id.* at 34.

55. A University of Michigan Mott Poll conducted in October 2021 suggested that schools should be an integral part of addressing overuse of social media and unsafe use—placing an additional financial burden on schools.<sup>32</sup>

### **B. Research Has Confirmed Using Social Media Harms Minors**

56. Social media use—especially excessive use—has severe and wide-ranging effects on youth mental health. Social media use is linked to increases in mental, emotional, developmental, and behavior disorders. Defendants are aware of this, as independent research and internal data from Defendants’ platforms show social media has a direct negative impact on teenagers’ mental health on several fronts.

57. In general, electronic screen use causes lower psychological well-being.<sup>33</sup> This link is especially evident among adolescents. Those with high screen time are twice as likely to receive diagnoses of depression, anxiety, or need treatment for mental or behavior health conditions compared to low screen time users.<sup>34</sup>

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<sup>32</sup> C.S. Mott Children’s Hospital, Univ. of Mich. Health, *Sharing Too Soon? Children and Social Media Apps* (Oct. 18, 2021), available at <https://mottpoll.org/reports/sharing-too-soon-children-and-social-media-apps> (last visited Mar. 21, 2023).

<sup>33</sup> Jean M. Twenge & W. Keith Campbell, *Associations between screen time and lower psychological well-being among children and adolescents: Evidence from a population-based study*, 12 *Prev. Med. Rep.* 271–83 (2018), available at <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6214874/>; Ariel Shensa *et al.*, *Social Media Use and Depression and Anxiety Symptoms: A Cluster Analysis*, 42(2) *Am. J. Health Behav.* 116–28 (2018), 18, available at <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5904786/>.

<sup>34</sup> Jean M. Twenge & W. Keith Campbell, *Associations between screen time and lower psychological well-being among children and adolescents: Evidence from a population-based study*, 12 *Prev. Med. Rep.* 271–83 (2018), available at <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6214874/>.

58. Increased social media use increases depressive symptoms, suicide-related outcomes, and suicide rates among adolescents.<sup>35</sup> One reason this is true is because it encourages unhealthy social comparison and feedback seeking behaviors.<sup>36</sup> Because adolescents spend a majority of their time on social media looking at other users' profiles and photos, they are likely to engage in negative comparisons with their peers.<sup>37</sup> Specifically, adolescents are likely to engage in harmful upward comparisons with others they perceive to be more popular.<sup>38</sup>

59. Clinicians have also observed a clear relationship between social media use and disordered eating behavior in minors.<sup>39</sup> The more social media accounts an adolescent has, the greater disordered eating behaviors they exhibit. Additionally, research shows the more time young girls spend on social media platforms, such as Instagram and Snapchat, the more likely they are to develop disordered eating behaviors.<sup>40</sup>

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<sup>35</sup> Jean M. Twenge et al., *Increases in Depressive Symptoms, Suicide-Related Outcomes, and Suicide Rates Among U.S. Adolescents After 2010 and Links to Increased New Media Screen Time*, 6 *Clinical Psych. Sci.* 3–17 (2017), available at <https://doi.org/10.1177/2167702617723376>.

<sup>36</sup> Jacqueline Nesi & Mitchell J. Prinstein, *Using Social Media for Social Comparison and Feedback-Seeking: Gender and Popularity Moderate Associations with Depressive Symptoms*, 43 *J. Abnormal Child Psych.* 1427–38 (2015), available at <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5985443/>.

<sup>37</sup> *Id.*; see also Nino Gugushvili et al., *Facebook use intensity and depressive symptoms: a moderated mediation model of problematic Facebook use, age, neuroticism, and extraversion* at 3, *BMC Psych.* 10, 279 (2022), available at <https://doi.org/10.1186/s40359-022-00990-7> (explaining that youth are particularly vulnerable because they “use social networking sites for construing their identity, developing a sense of belonging, and for comparison with others”).

<sup>38</sup> *Id.*

<sup>39</sup> Simon M. Wilksch et al., *The relationship between social media use and disordered eating in young adolescents*, 53 *Int'l J. Eating Disorders* 96–106 (2020), available at <https://pubmed.ncbi.nlm.nih.gov/31797420/>.

<sup>40</sup> *Id.*

60. Social media use has also caused an increase in cyberbullying. The more time an individual, especially males, spend on social media, the more likely they are to commit acts of cyberbullying.<sup>41</sup> Cyberbullying is now so common that most American teens, 59 percent, have experienced some form of cyberbullying.<sup>42</sup> This number includes 42 percent of teens experiencing name calling; 32 percent being subject to false rumors; 25 percent receiving an unsolicited explicit image; 21 percent being subject to online stalking; 16 percent receiving physical threats online; and 7 percent having had explicit images of them shared without their consent.<sup>43</sup>

61. Social media use also contributes to sleep deprivation. Young adults who spend excessive time on social media during the day or check it frequently throughout the week are more likely to suffer sleep disturbances than their peers who use social media infrequently.<sup>44</sup> In turn, disturbed and insufficient sleep is associated with poor health outcomes.<sup>45</sup>

62. Defendants exacerbate the disruption of sleep by sending push notifications and emails either at night when children should be sleeping or during school hours when they should

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<sup>41</sup> Amanda Giordano *et al.*, *Understanding Adolescent Cyberbullies: Exploring Social Media Addiction and Psychological Factors*, 7(1) J. Child & Adolescent Counseling 42–55 (2021), available at <https://www.tandfonline.com/doi/abs/10.1080/23727810.2020.1835420?journalCode=ucac20>.

<sup>42</sup> Monica Anderson, *A Majority of Teens Have Experienced Some Form of Cyberbullying*, Pew Rsch. Ctr. (Sept. 27, 2018), available at <https://www.pewresearch.org/internet/2018/09/27/a-majority-of-teens-have-experienced-some-form-of-cyberbullying/>.

<sup>43</sup> *Id.*

<sup>44</sup> Jessica C. Levenson *et al.*, *The Association Between Social Media Use and Sleep Disturbance Among Young Adults*, 85 Preventive Med. 36–41 (Apr. 2016), available at <https://www.sciencedirect.com/science/article/abs/pii/S0091743516000025>.

<sup>45</sup> *Id.*

be studying, thereby encouraging children to re-engage with Defendants’ platforms at times when using them is harmful to their health and well-being.<sup>46</sup>

63. Further, children are especially vulnerable to developing harmful behaviors because their prefrontal cortex is not fully developed.<sup>47</sup> Consequently, they find it particularly difficult to exercise the self-control required to regulate their own use of Defendants’ platforms. In this regard, self-regulation allows people to delay gratification, postponing an immediate reward for a better reward later. Adolescents’ low capacity for self-regulation means they are particularly vulnerable to the immediately pleasurable, but ultimately harmful, effects of the repeated dopamine spikes caused by an external stimulus, such as “likes” that activate the reward system in the brain.<sup>48</sup>

64. Defendants’ reward-based learning systems “contribute to the maintenance of excessive usage patterns.”<sup>49</sup>

65. With respect to this, minors are especially vulnerable to long-term harm from Defendants’ platforms because excessive and problematic use can disrupt the development of their cognitive function and their brains at a critical stage.

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<sup>46</sup> See, e.g., Beatrice Nolan, *Kids are waking up in the night to check their notifications and are losing about 1 night’s worth of sleep a week, study suggests*, Bus. Insider (Sept. 19, 2022), available at <https://www.businessinsider.com/social-media-costing-children-one-night-sleep-study-2022-9> (approximately 12.5% of children report waking up to check social media notifications).

<sup>47</sup> Nino Gugushvili et al., *Facebook use intensity and depressive symptoms: a moderated mediation model of problematic Facebook use, age, neuroticism, and extraversion* at 3, BMC Psych. 10, 279 (2022), available at <https://doi.org/10.1186/s40359-022-00990-7>.

<sup>48</sup> *Id.*

<sup>49</sup> *Id.*

### **C. Defendants’ Platforms Have Caused America’s Minors to Face a Mental Health Crisis**

66. The number of minors using Defendants’ social media platforms and the intensity of their use has increased significantly since 2008, which has contributed to a wide range of negative effects on youth mental health.

67. Today, one in five children ages 3-17 in the United States have a mental, emotional, developmental, or behavioral disorder.<sup>50</sup>

68. On December 7, 2021, the United States Surgeon General issued an advisory on the youth mental health crisis.<sup>51</sup> In issuing the advisory, the Surgeon General noted, “[m]ental health challenges in children, adolescents, and young adults are real and widespread. Even before the pandemic, an alarming number of young people struggled with feelings of helplessness, depression, and thoughts of suicide — and rates have increased over the past decade.”<sup>52</sup>

69. While the report highlights ways in which the COVID-19 pandemic has exacerbated mental health issues for American youth, it also highlights the mental health challenges youth faced before the pandemic. Specifically, the report notes that before the pandemic, “mental health challenges were the leading cause of disability and poor life outcomes in young people.”<sup>53</sup>

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<sup>50</sup> *U.S. Surgeon General Issues Advisory on Youth Mental Health Crisis Further Exposed by COVID-19 Pandemic*, U.S. Dep’t Health & Hum. Servs. (Dec. 6, 2021), available at <https://www.hhs.gov/sites/default/files/surgeon-general-youth-mental-health-advisory.pdf>.

<sup>51</sup> *Id.*

<sup>52</sup> *Id.*

<sup>53</sup> *Id.*

70. Before the pandemic, one in five children ages 3-17 in the United States had a mental, emotional, developmental, or behavior disorder.<sup>54</sup>

71. From 2009 to 2019, the rate of high school students who reported persistent feelings of sadness or hopelessness increased by 40 percent (to one out of every three kids).<sup>55</sup> The share of kids seriously considering attempting suicide increased by 36 percent, and the share of kids creating a suicide plan increased by 44 percent.<sup>56</sup>

72. From 2007 to 2019, suicide rates among youth ages 10-24 in the United States increased by 57 percent.<sup>57</sup> By 2018, suicide was the second leading cause of death for youth ages 10-24.<sup>58</sup>

73. From 2007 to 2016, emergency room visits for youth ages 5-17 rose 117 percent for anxiety disorders, 44 percent for mood disorders, and 40 percent for attention disorders.<sup>59</sup>

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<sup>54</sup> *Id.*

<sup>55</sup> *Protecting Youth Mental Health: The U.S. Surgeon General's Advisory* at 8, U.S. Dep't Health & Hum. Servs. (Dec. 7, 2021), available at <https://www.hhs.gov/sites/default/files/surgeon-general-youth-mental-health-advisory.pdf>.

<sup>56</sup> *Id.*

<sup>57</sup> *Id.*

<sup>58</sup> AAP-AACAP-CHA Declaration of a National Emergency in Child and Adolescent Mental Health, Am. Acad. Pediatrics (Oct. 19, 2021), available at <https://www.aap.org/en/advocacy/child-and-adolescent-healthy-mental-development/aap-aacap-cha-declaration-of-a-national-emergency-in-child-and-adolescent-mental-health/>.

<sup>59</sup> Matt Richtel, *A Teen's Journey Into the Internet's Darkness and Back Again*, N.Y. Times (Aug. 22, 2022), available at <https://www.nytimes.com/2022/08/22/health/adolescents-mental-health-technology.html>.



74. This and other data led the American Academy of Pediatrics, the American Academy of Child and Adolescent Psychiatry, and the Children’s Hospital Association to join the Surgeon General and declare a national emergency in child and adolescent mental health.<sup>60</sup>

75. President Biden also addressed the mental health crisis Defendants’ platforms have caused to minors in his State of the Union Address in 2022.<sup>61</sup> In that address, he noted that children were struggling from the harms of social media—even before the pandemic—and called on all Americans to “hold social media platforms accountable for the national experiment they’re conducting on our children for profit.”<sup>62</sup>

**D. Defendants Intentionally Market to, Design, and Operate Their Social Media Platforms for Users Who Are Minors**

76. The mental health crisis minors are facing today is the direct result of the Defendants’ deliberate choices and affirmative actions to design and market their social media platforms to attract minors.

77. Defendants each run and operate social media platforms. The interactive features Defendants provide on their platforms are similar in many respects. For example, Facebook, Instagram, Snapchat, TikTok, and YouTube all offer tailored “feeds” of content governed by algorithms (also designed by Defendants) intended to learn the user’s interests; ways to publicly

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<sup>60</sup> AAP-AACAP-CHA Declaration of a National Emergency in Child and Adolescent Mental Health, Am. Acad. Pediatrics (Oct. 19, 2021), *available at* <https://www.aap.org/en/advocacy/child-and-adolescent-healthy-mental-development/aap-aacap-cha-declaration-of-a-national-emergency-in-child-and-adolescent-mental-health/>.

<sup>61</sup> President Biden, State of the Union Address (Mar. 1, 2022) (transcript available at <https://www.whitehouse.gov/state-of-the-union-2022/>).

<sup>62</sup> *Id.*

express affirmation for such personalized content through “likes,” comments, and sharing or reposting the content; and, each is known to copy the designs and features of one another.<sup>63</sup>

78. Defendants use a tried and true method of profiting from their social media platforms: by selling to advertisers. Defendants collect data on their users’ viewing habits and behaviors, and they use that data to sell to advertisers to promote their products. Advertisers pay to target advertisements to specific categories of users, including minors.

79. Defendants view young, adolescent, and even pre-adolescent users as one of their most valuable commodities, since they are the consumers of their advertisements. Young users are integral to Defendants’ business models and advertising revenue, as children are more likely than adults to use social media.

80. Defendants’ tactics are working, as 95 percent of children ages 13-17 have cellphones,<sup>64</sup> 90 percent use social media,<sup>65</sup> and 28 percent buy products and services through social media.<sup>66</sup>

81. To profit from minors, Defendants intentionally market their platforms to youths and adolescents. For children under 13, the Children’s Online Privacy Protection Act (“COPPA”)<sup>67</sup>

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<sup>63</sup> See, e.g., Kevin Hurler, *For Sites Like Instagram and Twitter, Imitation Is the Only Form of Flattery*, Gizmodo (Aug. 16, 2022), available at <https://gizmodo.com/instagram-tiktok-snapchat-facebook-meta-1849395419>.

<sup>64</sup> Emily Vogels *et al.*, *Teens, Social Media and Technology 2022*, Pew Rsch. Ctr. (Aug. 10, 2022), available at <https://www.pewresearch.org/internet/2022/08/10/teens-social-media-and-technology-2022/>.

<sup>65</sup> Social Media and Teens, Am. Acad. Child & Adolescent Psychiatry (Mar. 2018), available at [https://www.aacap.org/AACAP/Families\\_and\\_Youth/Facts\\_for\\_Families/FFF-Guide/Social-Media-and-Teens-100.aspx](https://www.aacap.org/AACAP/Families_and_Youth/Facts_for_Families/FFF-Guide/Social-Media-and-Teens-100.aspx).

<sup>66</sup> Erinn Murphy *et al.*, *Taking Stock with Teens, Fall 2021* at 13, Piper Sandler (2021), available at [tinyurl.com/89ct4p88](https://tinyurl.com/89ct4p88).

<sup>67</sup> See 15 U.S.C. §§ 6501-6506.

regulates the conditions under which platforms, like Defendants, can collect and use their information.

82. COPPA requires platforms that either target children under age 13 or have actual knowledge of users under age 13<sup>68</sup> to obtain “verifiable parental consent” prior to collecting and using information about children under age 13. Defendants have violated COPPA by leaving users to self-report their age and having no safeguards in place to verify. Defendants doubled down on profiting from pre-adolescent audiences by offering “kid versions” of their platforms that, while not collecting and using their information, are “designed to fuel [kids’] interest in the grown-up version.”<sup>69</sup> Defendants are essentially grooming pre-adolescents to become addicted to their platforms, for profit.

83. Defendants have also intentionally designed and operated their platforms to maximize users’ screen time. This has been accomplished by building features and operating their platforms in a manner intended to exploit human psychology using complex algorithms driven by advanced artificial intelligence and machine-learning systems. Defendants have adapted their platforms in ways that promote excessive and problematic use, and they have done so in ways known to be harmful to children.

84. An example of how Defendants maximize the time users spend on their platforms involves the design of feeds. These feeds include photos, videos, and/or sponsored or promoted content. Each feed uses an algorithm to curate content for users to consume endlessly. Google’s

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<sup>68</sup> *Id.*

<sup>69</sup> Leonard Sax, *Is TikTok Dangerous for Teens?*, Inst. Fam. Stud. (Mar. 29, 2022), available at <https://ifstudies.org/blog/is-tiktok-dangerous-for-teens->.

former design ethicist, Tristan Harris, explained that this never-ending stream is designed to “keep [users] scrolling, and purposely eliminate any reason for [them] to pause, reconsider or leave.”<sup>70</sup> Defendants’ feeds take “an experience that was bounded and finite, and turn it into a bottomless flow that keeps going.”<sup>71</sup> This “flow state,” as psychologists describe it, “fully immerse[s]” users, distorts their perception of time, and “has been shown to be associated with problematic use of social networking sites.”<sup>72</sup>

85. Another way Defendants manipulate users is through social reciprocity. “Reciprocity” in this context means the powerful social phenomenon of how people respond to positive or hostile actions. Reciprocity means that in response to friendly actions, people respond in a friendly manner and vice versa.<sup>73</sup>

86. Reciprocity is a known and widely used tactic of Defendants. It is why Facebook and Snapchat automatically tell a “sender when you ‘saw’ their message, instead of letting you avoid disclosing whether you read it. As a consequence, you feel more obligated to respond[.]”

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<sup>70</sup> Von Tristan Harris, *The Slot Machine in Your Pocket*, Spiegel Int’l (July 27, 2016), available at <https://www.spiegel.de/international/zeitgeist/smartphone-addiction-is-part-of-the-design-a-1104237.html>.

<sup>71</sup> *Id.*

<sup>72</sup> Gino Gugushvili *et al.*, *Facebook use intensity and depressive symptoms: a moderated mediation model of problematic Facebook use, age, neuroticism, and extraversion* at 3, BMC Psych. 10, 279 (2022), available at <https://doi.org/10.1186/s40359-022-00990-7>.

<sup>73</sup> Ernst Fehr & Simon Gächter, *Fairness and Retaliation: The Economics of Reciprocity*, 14(3) J. Econ. Persps. 159–81 (2000), available at [https://www.researchgate.net/profile/Ernst-Fehr/2/publication/23756527\\_Fairness\\_and\\_Retaliation\\_The\\_Economics\\_of\\_Reciprocity/links/5eb024e945851592d6b87d3b/Fairness-and-Retaliation-The-Economics-of-Reciprocity.pdf](https://www.researchgate.net/profile/Ernst-Fehr/2/publication/23756527_Fairness_and_Retaliation_The_Economics_of_Reciprocity/links/5eb024e945851592d6b87d3b/Fairness-and-Retaliation-The-Economics-of-Reciprocity.pdf).

immediately.<sup>74</sup> That keeps users on the platform or, through push notifications—another dangerous tool—users feel psychologically compelled to return to and use the platform.

87. Additionally, Defendants manipulate users to keep using or returning to their platforms through the use of intermittent variable rewards (“IVR”). One commonly known example of IVR is slot machines.<sup>75</sup> Slot machines, like Defendants’ platforms, are designed to provide an intermittent reward that varies in value. IVR produces a dopamine response in the brain of the consumer, which in turn develops anticipation and craving. IVR is the fundamental way that gambling creates addiction, and it is used by Defendants to promote the same desire in a consumer’s brain to use their platforms.

88. Defendants use IVR heavily in the design and operations of their platforms by “link[ing] a user’s action (like pulling a lever) with a variable reward.”<sup>76</sup> For example, when “we swipe down our finger to scroll the Instagram feed, we’re playing a slot machine to see what photo comes next.”<sup>77</sup> The platform also delays the time it takes to load the feed. “This is because without that three-second delay, Instagram wouldn’t feel variable.”<sup>78</sup> Without that delay, there would be

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<sup>74</sup> Von Tristan Harris, *The Slot Machine in Your Pocket*, Spiegel Int’l (July 27, 2016), available at <https://www.spiegel.de/international/zeitgeist/smartphone-addiction-is-part-of-the-design-a-1104237.html>.

<sup>75</sup> See, e.g., Julian Morgans, *The Secret Ways Social Media is Built for Addiction*, Vice (May 17, 2017), available at <https://www.vice.com/en/article/vv5jkb/the-secret-ways-social-media-is-built-for-addiction>.

<sup>76</sup> Von Tristan Harris, *The Slot Machine in Your Pocket*, Spiegel Int’l (July 27, 2016), available at <https://www.spiegel.de/international/zeitgeist/smartphone-addiction-is-part-of-the-design-a-1104237.html>.

<sup>77</sup> *Id.*

<sup>78</sup> Julian Morgans, *The Secret Ways Social Media is Built for Addiction*, Vice (May 17, 2017), available at <https://www.vice.com/en/article/vv5jkb/the-secret-ways-social-media-is-built-for-addiction>.

no time for users' anticipation to build. In slot machine terms, there would be "no sense of will I win? because you'd know instantly. So the delay isn't the app loading. It's the cogs spinning on the slot machine."<sup>79</sup> Each of the Defendants' platforms exploits this biochemical reaction among its users, typically using "likes," "hearts," a thumbs up, or other forms of approval that serve as the reward.

89. As discussed above, Defendants specifically target minors. "Everyone innately responds to social approval, but some demographics, in particular teenagers, are more vulnerable to it than others."<sup>80</sup>

90. Minors are especially vulnerable both to the ways in which Defendants manipulate users to maximize their "watch time," and to the resulting harms. Children's brains undergo a fundamental shift around age 10 that makes "preteens extra sensitive to attention and admiration from others."<sup>81</sup>

91. In adolescence, the structures of the brain "closely tied" to social media activity and that drive instinctual behavior begin to change.<sup>82</sup> The ventral striatum is one of those structures. It receives a rush of dopamine and oxytocin, known as the "happy hormones[.]"

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<sup>79</sup> *Id.*

<sup>80</sup> Von Tristan Harris, *The Slot Machine in Your Pocket*, Spiegel Int'l (July 27, 2016), available at <https://www.spiegel.de/international/zeitgeist/smartphone-addiction-is-part-of-the-design-a-1104237.html>.

<sup>81</sup> Zara Abrams, *Why young brains are especially vulnerable to social media*, Am. Psych. Ass'n (Aug. 25, 2022), available at <https://www.apa.org/news/apa/2022/social-media-children-teens>.

<sup>82</sup> *Id.*

whenever we experience social rewards.<sup>83</sup> Between the ages of 10 and 12, the receptors for those happy hormones begin to multiply in this region of the brain, which makes compliments on a new hairstyle, laughter from a classmate, or other social rewards “start to feel a lot more satisfying.”<sup>84</sup>

92. Prior to the rise of social media, these biological changes incentivized children to develop healthy social skills and connections. “But arriving at school in a new pair of designer jeans, hoping your crush will smile at you in the hallway, is worlds away from posting a video on TikTok that may get thousands of views and likes,” according to Mitch Prinstein, Chief Science Officer for the American Psychology Association.<sup>85</sup>

93. Part of what makes the “interactions so different,”<sup>86</sup> is that they are often permanent and public in nature. There is no public record tracking the number of consecutive days you have spoken to someone, like there is for Snapchat “streaks.” Similarly, “[a]fter you walk away from a regular conversation, you don’t know if the other person liked it, or if anyone else liked it[.]”<sup>87</sup> On Defendants’ platforms, kids, their friends, and even complete strangers can publicly deliver or withhold social rewards in the form of likes, comments, views and follows.<sup>88</sup>

94. These social rewards release dopamine and oxytocin in the brains of children and adults alike, but there are two key differences, as Chief Science Officer Prinstein explained:

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<sup>83</sup> *Id.*

<sup>84</sup> *Id.*

<sup>85</sup> *Id.*

<sup>86</sup> *Id.*

<sup>87</sup> *Id.*

<sup>88</sup> *Id.*

“First, adults tend to have a fixed sense of self that relies less on feedback from peers. Second, adults have a more mature prefrontal cortex, an area that can help regulate emotional responses to social rewards.”<sup>89</sup>

95. Minors, by contrast, are in a “period of personal and social identity formation,” much of which “is now reliant on social media.”<sup>90</sup> “Due to their limited capacity for self-regulation and their vulnerability to peer pressure,” adolescents “are at greater risk of developing mental disorder.”<sup>91</sup>

96. Together, Defendants have designed, promoted, marketed, and operated their social media platforms to maximize the number of minors who use their platforms and the time they spend on those platforms. Despite knowing that social media inflicts harms on children, Defendants have continued to create more advanced and adapted versions of their platforms with features curated to keep users engaged and maximize the amount of time they spend using their platforms. Due to Defendants’ conduct in designing and marketing exploitive and manipulative platforms, minors spend excessive amounts of time on Defendants’ platforms.

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<sup>89</sup> *Id.*

<sup>90</sup> Betul Keles *et al.*, *A systematic review: the influence of social media on depression, anxiety and psychological distress in adolescents*, Int’l J. Adolescence & Youth (202) 25:1, 79–93 (Mar. 3, 2019), *available at* [https://www.researchgate.net/publication/331947590\\_A\\_systematic\\_review\\_the\\_influence\\_of\\_social\\_media\\_on\\_depression\\_anxiety\\_and\\_psychological\\_distress\\_in\\_adolescents/fulltext/5c94432345851506d7223822/A-systematic-review-the-influence-of-social-media-on-depression-anxiety-and-psychological-distress-in-adolescents.pdf](https://www.researchgate.net/publication/331947590_A_systematic_review_the_influence_of_social_media_on_depression_anxiety_and_psychological_distress_in_adolescents/fulltext/5c94432345851506d7223822/A-systematic-review-the-influence-of-social-media-on-depression-anxiety-and-psychological-distress-in-adolescents.pdf).

<sup>91</sup> *Id.*



97. Defendants' campaigns and design were wildly successful. Most teenagers use the same five social media platforms: YouTube, TikTok, Instagram, Snapchat, and Facebook.<sup>92</sup> Each of these platforms individually represents that they have a high numbers of teenage users.

1. Meta Intentionally Marketed to and Designed Their Social Media Platforms for Minor Users, Substantially Contributing to the Mental Health Crisis

*a. The Meta Platform*

98. The Meta platform, including Facebook and Instagram, are among the most popular social networking platforms in the world, with more than 3.6 billion users worldwide.<sup>93</sup>

*(1) Facebook*

99. Facebook is a social networking platform included in Meta.

100. Since its release in 2004, Facebook has become the largest social network in the world. As of October 2021, Facebook had approximately 2.9 billion monthly active users, approximately 2 billion of whom use Facebook every day.<sup>94</sup>

101. When Facebook was first released, it was not widely used, initially. Only students at certain colleges and universities could use the social media platform, and verification of college enrollment was required for access.

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<sup>92</sup> Emily Vogels et al., *Teens, Social Media and Technology 2022*, Pew Rsch. Ctr. (Aug. 10, 2022), available at <https://www.pewresearch.org/internet/2022/08/10/teens-social-media-and-technology-2022/>.

<sup>93</sup> Felix Richter, *Meta Reaches 3.6 Billion People Each Month*, Statista (Oct. 29, 2021), available at <https://www.statista.com/chart/2183/facebook-mobile-users/>.

<sup>94</sup> See *Id.*; S. Dixon, Number of Daily Active Facebook Users Worldwide as of 3rd Quarter 2022 (in Millions), Statista (Oct. 27, 2022), available at <https://www.statista.com/statistics/346167/facebook-global-dau/>.

102. In 2005, Facebook expanded and became accessible to students at additional universities around the world, after which Meta launched a high school version of Facebook that also required an invitation to join. In the early stages, exclusivity rather than profit was the focus.

103. Meta slowly expanded eligibility for Facebook to add additional users to its network.

104. In September 2006, Facebook became available to all internet users. Meta initially claimed that it was open only to persons aged 13 and older with a valid email address; however, on information and belief, Meta did not require any verification of a user's age or identity, and did not actually verify users' email addresses, so underage users could easily register an account with and access Facebook.

105. Facebook then underwent a series of changes aimed at increasing user engagement, profits, and platform growth, without regard to user safety, including the following:

(a) In 2009, Facebook launched the "like" button;

(b) In 2011, Facebook launched Messenger, its direct messaging service, and started allowing people to subscribe to non-friends. In essence, Facebook Messenger can be used just like texting;

(c) In 2012, advertisements appeared on Facebook news feed, and a real-time bidding system was launched through which advertisers could bid on users based on their visits to third-party websites;

(d) In 2014, Facebook's facial recognition algorithm (DeepFace) reached precise accuracy in identifying faces;

(e) In 2015, Facebook made significant changes to its news feed algorithm to determine what content to show users and launched its live-streaming service;

(f) In 2016, Facebook launched games for its social media platform so that users could play games without having to leave the platform; and

(g) In 2017, Facebook launched Facebook Creator, an app for mobile video posts, which assists with content creation.

(2) *Instagram*

106. Instagram is a social media platform that launched in 2010, which Meta acquired for \$1 Billion in April 2012.

107. Instagram allows users to share photos and videos with other users, and to view other users' photos and videos. These photos and videos appear on users' Instagram "feeds," which are endless.

108. After being acquired by Meta, Instagram experienced huge user growth, from approximately 10 million monthly active users in September 2012 to more than one billion monthly active users worldwide today, including approximately 160 million users in the United States.<sup>95</sup>

109. The number of Instagram users continues to climb, and it has been projected to reach nearly one-third of the world's internet users by 2025. "In 2021, there were 1.21 billion monthly active users of Meta's Instagram, making up over 28 percent of the world's internet users. By 2025, it has been forecast that there will be 1.44 billion monthly active users of the social media platform, which would account for 31.2 percent of global internet users."<sup>96</sup>

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<sup>95</sup> S. Dixon, *Number of Instagram Users Worldwide from 2020 to 2025 (in Billions)*, Statista (May 23, 2022), available at <https://www.statista.com/statistics/183585/instagram-number-of-global-users/>.

<sup>96</sup> S. Dixon, *Number of Instagram Users Worldwide from 2020 to 2025 (in Billions)*, Statista (Feb. 15, 2023), available at <https://www.statista.com/statistics/183585/instagram-number-of-global-users/>.

110. Instagram’s user growth was driven by design and development changes to the Instagram platform that increased engagement at the expense of the health and well-being of Instagram’s users—especially the children using the platform.

111. Instagram continued its addictive methods when in August 2020, Instagram began promoting and recommending short videos to users, called Reels.<sup>97</sup> Like TikTok, Instagram allows users to view an endless feed of Reels that are recommended and curated to users by Instagram’s algorithm.

112. Instagram has become the most popular photo sharing social media platform among children in the United States. According to a Pew research study from 2021, approximately 72 percent of children aged 13-17 in the United States use Instagram.<sup>98</sup>

### (3) *Meta Targets Minors*

113. To maximize the revenue generated from advertisers, Meta has expended significant effort to attract minors, including teens and preteens, to its platforms by designing features that appeal to them. Meta also views teenagers as a way to attract other potential users, for example, by using teenagers to recruit parents who want to participate in their children’s lives as well as younger siblings who look to older siblings as models for which social media platforms to use and how to use them.<sup>99</sup>

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<sup>97</sup> Introducing Instagram Reels, Instagram (Aug. 5, 2020), *available at* <https://about.instagram.com/blog/announcements/introducing-instagram-reels-announcement>.

<sup>98</sup> Katherine Schaeffer, *7 Facts About Americans and Instagram*, Pew Rsch. Ctr. (Oct. 7, 2021), *available at* <https://www.pewresearch.org/fact-tank/2021/10/07/7-facts-about-americans-and-instagram/>.

<sup>99</sup> Sheera Frenkel et al., *Instagram Struggles with Fears of Losing Its ‘Pipeline’: Young Users*, N.Y. Times (Oct. 26, 2021), *available at* <https://www.nytimes.com/2021/10/16/technology/instagram-teens.html>.

114. Meta explicitly targets minors. An internal Instagram marketing plan shows that Meta is aware “[i]f we lose the teen foothold in the U.S. we lose the pipeline” for growth.<sup>100</sup> To ensure that did not happen, Meta’s Instagram devoted almost all of its \$390 million annual marketing budget for 2018 to target teenagers.<sup>101</sup>

115. Meta also views preteens as a “valuable but untapped audience,” even contemplating “exploring playdates as a growth lever.”<sup>102</sup> Meta formed a team to study preteens, designed more products designed for them, and focused their strategy on the “business opportunities” created.<sup>103</sup>

116. The Meta platforms are designed to be used by children and are actively marketed to children throughout the United States. Internal Meta documents establish that Meta spends hundreds of millions of dollars researching, analyzing, and marketing to children to find ways to make its platforms more appealing to these age groups and to maximize the time children spend on its platforms, as these age groups are seen as essential to Meta’s long-term profitability and market dominance.<sup>104</sup> For instance, after Instagram’s founders left Meta in September 2018, “Facebook went all out to turn Instagram into a main attraction for young audiences,” and “began

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<sup>100</sup> *Id.*

<sup>101</sup> *Id.*

<sup>102</sup> *Id.*

<sup>103</sup> Georgia Wells & Jeff Horwitz, *Facebook’s Effort to Attract Preteens Goes Beyond Instagram Kids, Documents Show; It has investigated how to engage young users in response to competition from Snapchat, TikTok; ‘Exploring playdates as a growth lever*, Wall St. J. (Sept. 28, 2021), available at <https://www.wsj.com/articles/facebook-instagram-kids-tweens-attract-11632849667> (last visited Mar. 21, 2023).

<sup>104</sup> *Id.*

concentrating on the ‘teen time spent’ data point,” in order to “drive up the amount of time that teenagers were on the app with features including Instagram Live, a broadcasting tool, and Instagram TV, where people upload videos that run as long as an hour.”<sup>105</sup>

117. Similarly, Instagram’s popularity among young people is the direct result of Meta’s deliberate efforts to target children—which in turn is driven by the desire of advertisers and marketers to target children on Meta’s platforms. In fact, Meta’s acquisition of Instagram was primarily motivated by its desire to make up for declines in the use of Facebook by children, and Meta views Instagram as central to its ability to attract and retain young audiences. A 2018 internal Meta marketing report exposes this, bemoaning the loss of teenage users to competitors’ platforms as “an existential threat.”<sup>106</sup> In contrast, a Meta presentation from 2019 indicated that “Instagram is well positioned to resonate and win with young people,” and “[t]here is a path to growth if Instagram can continue their trajectory.”<sup>107</sup>

118. With respect to pre-teens, Meta’s policy is that they cannot register an account, but Meta knowingly disregards and fails to enforce this policy. Since at least 2011, Meta has known that its age-verification protocols are largely inadequate, estimating at that time that it removed 20,000 children under age 13 from Facebook every day.<sup>108</sup> In 2021, Adam Mosseri, the Meta

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<sup>105</sup> Sheera Frenkel et al., *Instagram Struggles with Fears of Losing Its ‘Pipeline’: Young Users*, N.Y. Times (Oct. 26, 2021), available at <https://www.nytimes.com/2021/10/16/technology/instagram-teens.html>.

<sup>106</sup> *Id.*

<sup>107</sup> Georgia Wells et al., *Facebook Knows Instagram Is Toxic for Teen Girls, Company Documents Show; Its own in-depth research shows a significant teen mental-health issue that Facebook plays down in public*, Wall St. J. (Sept. 14, 2021), available at <https://www.wsj.com/articles/facebook-knows-instagram-is-toxic-for-teen-girls-company-documents-show-11631620739>.

<sup>108</sup> Austin Carr, *Facebook Booting “20,000” Underage Users Per Day: Reaction to Growing Privacy Concerns?*, Fast Co. (Mar. 22, 2011), available at

executive in charge of Instagram, acknowledged users under 13 can still “lie about [their] age now” to register an account.<sup>109</sup>

119. Meta has yet to implement protocols to verify a user’s age, likely due to the fact it has strong business incentives not to undertake such verification. Meta also has agreements with cell phone manufacturers, providers, and/or retailers, who often pre-install its platforms on mobile devices prior to sale and without regard to the age of the intended user of each such device. That is, even though Meta is prohibited from providing the Meta platforms to users under the age of 13, Meta knowingly and actively promotes and provides underage users access to its platforms by encouraging and allowing cell phone manufacturers, providers and/or retailers to pre-install the platforms on mobile devices indiscriminately. Consequently, approximately 11 percent of United States children between the ages of 9 and 11 used Instagram in 2020,<sup>110</sup> despite Meta claiming to remove approximately 600,000 underage users per quarter.<sup>111</sup>

120. Meta’s efforts to attract young users have been successful.

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<https://www.fastcompany.com/1741875/facebook-booting-20000-underage-users-day-reaction-growing-privacy-concerns>.

<sup>109</sup> Georgia Wells & Jeff Horwitz, *Facebook’s Effort to Attract Preteens Goes Beyond Instagram Kids, Documents Show; It has investigated how to engage young users in response to competition from Snapchat, TikTok; ‘Exploring playdates as a growth lever*, Wall St. J. (Sept. 28, 2021), available at <https://www.wsj.com/articles/facebook-instagram-kids-tweens-attract-11632849667>.

<sup>110</sup> Brooke Auxier *et al.*, *Parenting Children in the Age of Screens*, Pew Rsch. Ctr. (July 28, 2020), available at <https://www.pewresearch.org/internet/2020/07/28/childrens-engagement-with-digital-devices-screen-time/>.

<sup>111</sup> Georgia Wells & Jeff Horwitz, *Facebook’s Effort to Attract Preteens Goes Beyond Instagram Kids, Documents Show; It has investigated how to engage young users in response to competition from Snapchat, TikTok; ‘Exploring playdates as a growth lever*, Wall St. J. (Sept. 28, 2021), available at <https://www.wsj.com/articles/facebook-instagram-kids-tweens-attract-11632849667>.

(4) *Meta Intentionally Maximizes the Times Users Spend on its Platforms*

121. The Meta platforms are designed to maximize time spent on the platform, utilizing features that exploit the natural human need for social interaction and the neurophysiology of the brain's reward systems to keep users endlessly scrolling, posting, "liking," commenting, and returning to the app to check engagement on their posts. Minors' brains, which are in developmental stages, are especially vulnerable to such misuse.

122. One of the ways in which Meta employs IVR is through its push notifications, which promote habitual use and are designed to prompt users to open the app and be exposed to content selected to maximize the use of Meta's platforms. In particular, Meta purposefully delays notifications of likes and comments into notifying in several bursts rather than notifying users in real time, so as to create dopamine responses that leave users craving more and promoting addiction. Meta's push notifications are specifically designed to manipulate users into reengaging with Meta's platforms to increase user engagement regardless of a user's age.

123. Meta also exploits IVR to manipulate users with one of its most defining features: the "Like" button. Meta is aware that "Likes" are a source of social comparison harm for many users, as detailed below. Several former Meta employees involved in creating the Like button have spoken publicly about the manipulative nature of Meta's platforms and the harm they cause users.<sup>112</sup>

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<sup>112</sup> See, e.g., Paul Lewis, "'Our minds can be hijacked': the tech insiders who fear a smartphone dystopia", The Guardian (Oct. 6, 2017), available at <https://www.theguardian.com/technology/2017/oct/05/smartphone-addiction-silicon-valley-dystopia> (last visited Mar. 23, 2023).



124. Additionally, Meta designed other features of its platforms on IVR principles, such as posts, comments, tagging, and the “pull to refresh” feature, which enables a user to scroll endlessly through content.

125. Other design decisions were motivated by social reciprocity, such as the use of visual cues to reflect that someone is currently typing a response to a message, which keeps the user on the platform longer, awaiting the message response and providing read receipts for messages.

126. The Meta platforms are designed to encourage users to post content and to interact with other users’ posts. Each new post that appears on a user’s feed functions as a dopamine-producing social interaction in the user’s brain. Similarly, likes, comments, and other interactions with a user’s post function as an even stronger dopamine-producing stimulus than does seeing new posts from other users. Thus, users are motivated to post content they expect will encourage interaction. Meta has purposefully designed its platforms to essentially trap users (especially minors) in endless cycles of “little dopamine loops.”<sup>113</sup>

*(5) Meta’s Algorithms Are Manipulative and Harmful*

128. Meta designs and employs advanced algorithms and artificial intelligence to keep its platforms as engaging and habit forming as possible. For example, the Meta platforms display curated content and recommendations that are customized to each user by using sophisticated algorithms. The proprietary services developed through such algorithms include: News Feed (a feed of stories and posts published on the platform, some of which are posted by

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<sup>113</sup> Allison Slater Tate, *Facebook whistleblower Frances Haugen says parents make 1 big mistake with social media*, Today (Feb. 7, 2022), available at <https://www.today.com/parents/teens/facebook-whistleblower-frances-haugen-rcna15256> (last visited Mar. 30, 2023).

connections/friends and others that are picked by Meta’s algorithms), People You May Know (algorithm-based suggestions of persons or accounts), Suggested for You, and Discover (algorithm-based recommendations). Such algorithm-based content and recommendations are presented to each user while the user is on the platform and through notifications sent to the user’s smartphone and email address when the user is not on the platform.

129. Meta’s algorithms are not based exclusively on user requests or even user inputs. Meta’s algorithms combine information entered or posted by the user on the platform with the user’s demographics and other data points collected and analyzed by Meta; make assumptions about that user’s interests and preferences; make predictions about what else might appeal to the user; and then make very specific recommendations of posts and pages to view and groups to visit and join based on rankings that will optimize Meta’s key performance indicators. Meta’s design dictates the way content is presented, such as its ranking and prioritization.<sup>114</sup>

130. Meta’s current use of algorithms in its platforms is driven and designed to maximize user engagement. Recently, Meta has transitioned away from chronological ranking, which organized the interface according to when content was posted or sent, to prioritize Meaningful Social Interactions (“MSI”), which emphasizes users’ connections and interactions such as likes and comments and gives greater significance to the interactions of connections that appeared to be the closest to users. Meta developed and employed an “amplification algorithm” to execute engagement-based ranking, which considers a post’s likes, shares, and comments, as well as a

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<sup>114</sup> See, e.g., Adam Mosseri, *Shedding More Light on How Instagram Works*, Instagram (June 8, 2021), <https://about.instagram.com/blog/announcements/shedding-more-light-on-how-instagram-works>.

user's past interactions with similar content, and shows the post in the user's newsfeed if it otherwise meets certain benchmarks.

131. Meta's algorithms secretly operate on the principle that intense reactions compel attention. Because these algorithms measure reactions and contemporaneously immerse users in the most reactive content, these algorithms effectively work to steer users toward the most negative content, because negative content routinely elicits passionate reactions.

132. Due to its focus on user engagement, Meta's algorithms promote content that is objectionable and harmful to many users, including minors. Meta was very aware of the harmful content that it was promoting, yet failed to change its algorithms because the inflammatory content that its algorithms were feeding to users fueled their return to the platforms and led to more engagement—which in turn helped Meta sell more advertisements and more profit. Meta's algorithms promote harmful content because such content increases user engagement, which thereby increases its appeal to advertisers and increases its overall value and profitability.

133. Meta's shift from chronological ranking to algorithm-driven content and recommendations has changed the Meta platforms in ways that are dangerous and harmful to children, whose psychological susceptibility to habit-forming platforms put them at greater risk of harm from the Meta platforms' exploitive and harmful features. In this regard, the algorithms used by Meta's platforms exploit child users' diminished decision-making capacity, impulse control, emotional maturity, and psychological resiliency caused by users' incomplete brain development—and Meta specifically designs its platforms with these vulnerabilities in mind.

#### *(6) Facebook and Instagram's Harmful "Feeds"*

134. Facebook and Instagram feature a primary component which is promoting to each user a "feed" that is generated by an algorithm for that user, which consists of a series of photos,

videos, and text posts posted by accounts that the user follows, along with advertising and content specifically selected by algorithms and promoted by Meta.

135. These feeds are endless lists of content that encourage users to scroll continuously without any natural end points, thus making it less likely the user would leave the app. In this regard, “[u]nlike a magazine, television show, or video game,” the Meta platforms only rarely prompt their users to take a break by using “stopping cues.”<sup>115</sup> Meta’s “bottomless scrolling” feature is designed to encourage users to use its platforms for unlimited periods of time.

136. Meta also controls a user’s feed through certain ranking mechanisms, escalation loops, and promotion of advertising and content specifically selected and promoted by Meta based on, among other things, its ongoing planning, assessment, and prioritization of the types of information most likely to increase user engagement.

137. As described above, the algorithms generating a user’s feed encourage excessive use and promote harmful content, particularly where the algorithm is designed to prioritize the number of interactions rather than the quality of interactions.

138. Meta utilizes private information of its child users to “precisely target [them] with content and recommendations, assessing what will provoke a reaction,” including encouragement of “destructive and dangerous behaviors,” which is how Meta “can push teens into darker and darker places.”<sup>116</sup> As such, Meta’s “amplification algorithms, things like engagement based

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<sup>115</sup> See Zara Abrams, *How Can We Minimize Instagram’s Harmful Effects?*, Am. Psych. Ass’n (Dec. 2, 2021), available at <https://www.apa.org/monitor/2022/03/feature-minimize-instagram-effects>.

<sup>116</sup> See *Facebook Whistleblower Frances Haugen Testifies on Children & Social Media Use: Full Senate Hearing Transcript* at 09:02, Rev (Oct. 5, 2021), available at <https://www.rev.com/blog/transcripts/facebook-whistleblower-frances-haugen-testifies-on-children-social-media-use-full-senate-hearing-transcript>.

ranking . . . can lead children . . . all the way from just something innocent like healthy recipes to anorexia promoting content over a very short period of time.”<sup>117</sup> Meta thus specifically selects and pushes this harmful content on its platforms, for which it is then paid, and does so both for direct profit and also to increase user engagement, resulting in additional profits down the road.

139. Meta’s Instagram platform features a feed of “Stories,” which are short-lived photo or video posts that are accessible only for 24 hours. This feature encourages constant, repeated, and compulsive use of Instagram, so that users do not miss out on content before it disappears. As with other feeds, the presentation of content in a user’s “Stories” is generated by an algorithm designed by Meta to maximize the amount of time a user spends on the app.

140. Instagram also features a feed called “Explore,” which displays content posted by users not previously “followed.” The content in “Explore” is selected and presented by an algorithm designed by Meta to maximize the amount of time a user spends on the app. As with other feeds, the “Explore” feature may be scrolled endlessly, and its algorithm will continually generate new recommendations, encouraging users to use the app for unlimited periods of time.

141. Instagram features a feed called “Reels,” which presents short video posts by users not previously followed. These videos play automatically, without input from the user, encouraging the user to stay on the app for indefinite periods of time. As with other feeds, “Reels” content is selected and presented by an algorithm designed by Meta to maximize the amount of time a user spends on the app.

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<sup>117</sup> *Id.* at 37:34 (statement by Ms. Frances Haugen).

(7) *Meta Is Aware That Its Platforms Are Harmful to Minors*

142. For years, Meta has been aware that the content it is intentionally promoting to users, including children, is harmful to their physical and mental health, yet failed to mitigate or stop the damage it was perpetuating, due to profit.

143. In an internal slide presentation in 2019, Meta’s own researchers studying Instagram’s effects on children concluded that “[w]e make body image issues worse for one in three teen girls[.]”<sup>118</sup> This presentation was one of many documents leaked by former Meta employee Frances Haugen to journalists at *The Wall Street Journal* and federal regulators in 2021.<sup>119</sup> *The Wall Street Journal*’s reporting on the documents began in September 2021 and caused a national and international uproar.

144. The leaked documents confirmed what social scientists have long suspected; that social media platforms like Meta’s can cause serious harm to the mental and physical health of children.<sup>120</sup> Moreover, this capacity for harm is by design—what makes the Meta platforms profitable is precisely what harms its young users.

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<sup>118</sup> Georgia Wells et al., *Facebook Knows Instagram Is Toxic for Teen Girls, Company Documents Show; Its own in-depth research shows a significant teen mental-health issue that Facebook plays down in public*, Wall St. J. (Sept. 14, 2021), available at <https://www.wsj.com/articles/facebook-knows-instagram-is-toxic-for-teen-girls-company-documents-show-11631620739>.

<sup>119</sup> See Paul Marsden, *The ‘Facebook Files’ on Instagram Harms—All Leaked Slides on a Single Page*, Digital Wellbeing (Oct. 20, 2021), available at <https://digitalwellbeing.org/the-facebook-files-on-instagram-harms-all-leaked-slides-on-a-single-page/>. See also Dell Cameron et al., *Read the Facebook Papers for Yourself*, Gizmodo (Apr. 18, 2022), available at <https://gizmodo.com/facebook-papers-how-to-read-1848702919>.

<sup>120</sup> See *Facebook Whistleblower Testifies on Protecting Children Online*, C-SPAN (Oct. 5, 2021), available at <https://www.c-span.org/video/?515042-1/whistleblower-frances-haugen-calls-congress-regulate-facebook>.

145. Upon information and belief, at least as far back as 2019, Meta initiated a Proactive Incident Response experiment, which began researching the effect of Meta on the mental health of today's children. Meta's own in-depth analyses show significant mental-health issues stemming from the use of Instagram among teenage girls, many of whom linked suicidal thoughts and eating disorders to their experiences on the app.<sup>121</sup> In this regard, Meta's researchers have repeatedly found that Instagram is harmful for a sizable percentage of teens that use the platform.<sup>122</sup>

146. In particular, the researchers found that "[s]ocial comparison," or peoples' assessment of their own value relative to that of others, is "worse on Instagram" for teens than on other social media platforms.<sup>123</sup> One in five teens reported that Instagram "makes them feel worse about themselves."<sup>124</sup> Roughly two in five teen users reported feeling "unattractive," while one in 10 teen users reporting suicidal thoughts traced them to Instagram.<sup>125</sup> Teens "consistently" and without prompting blamed Instagram "for increases in the rate of anxiety and depression."<sup>126</sup> And although teenagers identify Instagram as a source of psychological harm, they often lack the self-control to use Instagram less. Also, according to Meta's own researchers, young users are not

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<sup>121</sup> See Georgia Wells et al., *Facebook Knows Instagram Is Toxic for Teen Girls, Company Documents Show*, Wall St. J. (Sept. 14, 2021, 7:59 AM), available at [https://www.wsj.com/articles/facebook-knows-instagram-is-toxic-for-teen-girls-company-documents-show-11631620739?mod=hp\\_lead\\_pos7&mod=article\\_inline](https://www.wsj.com/articles/facebook-knows-instagram-is-toxic-for-teen-girls-company-documents-show-11631620739?mod=hp_lead_pos7&mod=article_inline).

<sup>122</sup> *Id.*

<sup>123</sup> *Id.*

<sup>124</sup> *Id.*

<sup>125</sup> *Id.*

<sup>126</sup> *Id.*

capable of controlling their Instagram use to protect their own health.<sup>127</sup> Such users “often feel ‘addicted’ and know that what they’re seeing is bad for their mental health but feel unable to stop themselves.”<sup>128</sup>

147. Similarly, in a March 2020 presentation posted to Meta’s internal message board, researchers found that “[t]hirty-two percent of teen girls said that when they felt bad about their bodies, Instagram made them feel worse.”<sup>129</sup> Sixty-six percent of teen girls and 40 percent of teen boys have experienced negative social comparison harms on Instagram.<sup>130</sup> Further, approximately 13 percent of teen-girl Instagram users say the platform makes thoughts of “suicide and self harm” worse, and 17 percent of teen-girl Instagram users say the platform makes “[e]ating issues” worse.<sup>131</sup> Meta’s researchers also acknowledged that “[m]ental health outcomes” related to the

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<sup>127</sup> *Id.*

<sup>128</sup> *Id.*

<sup>129</sup> *Id.*; see also *Teen Girls Body Image and Social Comparison on Instagram—An Exploratory Study in the U.S.*, Wall St. J. (Sept. 29, 2021), available at <https://s.wsj.net/public/resources/documents/teen-girls-body-image-and-social-comparison-on-instagram.pdf>; see also *Hard Life Moments-Mental Health Deep Dive* at 14, Facebook (Nov. 2019), available at <https://about.fb.com/wp-content/uploads/2021/09/Instagram-Teen-Annotated-Research-Deck-1.pdf>; Paul Marsden, *The ‘Facebook Files’ on Instagram harms – all leaked slides on a single page* at slide 14, Dig. Wellbeing (Oct. 20, 2021), available at <https://digitalwellbeing.org/the-facebook-files-on-instagram-harms-all-leaked-slides-on-a-single-page> (hard life moment – mental health deep dive).

<sup>130</sup> *Teen Girls Body Image and Social Comparison on Instagram—An Exploratory Study in the U.S.* at 9, Wall St. J. (Sept. 29, 2021), available at <https://s.wsj.net/public/resources/documents/teen-girls-body-image-and-social-comparison-on-instagram.pdf>.

<sup>131</sup> *Hard Life Moments-Mental Health Deep Dive* at 14, Facebook (Nov. 2019), available at <https://about.fb.com/wp-content/uploads/2021/09/Instagram-Teen-Annotated-Research-Deck-1.pdf>; Paul Marsden, *The Facebook Files’ on Instagram arms – all leaked slides on a single page* at slide 14, Dig. Wellbeing (Oct. 20, 2021), available at <https://digitalwellbeing.org/the-facebook-files-on-instagram-harms-all-leaked-slides-on-a-single-page>.



use of Instagram “can be severe,” including “Body Dissatisfaction,” “Body Dysmorphia,” “Eating Disorders,” “Loneliness,” and “Depression.”<sup>132</sup>

148. The leaked documents show that Meta is aware of the harmful nature of its platforms and the specific design features that lead to excessive use and harm to children. For instance, Meta knows that Instagram’s “Explore,” “Feed,” and “Stories” features contribute to social comparison harms “in different ways.” Moreover, specific “[a]spects of Instagram exacerbate each other to create a perfect storm”<sup>133</sup> of harm to users, and that the “social comparison sweet spot”—a place of considerable harm to users, particularly teenagers and teen girls—lies at the center of Meta’s model and platforms’ features.<sup>134</sup> In this regard, Meta’s researchers wrote that “[s]ocial comparison and perfectionism are nothing new, but Instagram is ‘the reason’ why there are higher levels of anxiety and depression in young people.”<sup>135</sup>

*b. Snap Intentionally Marketed to and Designed its Social Media Platform for Minor Users and has Substantially Contributed to the Youth Mental Health Crisis.*

149. Snapchat was created in 2011 by Stanford University students Evan Spiegel and Bobby Murphy, who serve as Snap Inc.’s CEO and CTO respectively.<sup>136</sup>

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<sup>132</sup> *Teen Girls Body Image and Social Comparison on Instagram—An Exploratory Study in the U.S.* at 34, Wall St. J. (Sept. 29, 2021), available at <https://s.wsj.net/public/resources/documents/teen-girls-body-image-and-social-comparison-on-instagram.pdf>.

<sup>133</sup> *Id.* at 31.

<sup>134</sup> *Id.* at 31.

<sup>135</sup> *See Hard Life Moments-Mental Health Deep Dive* at 53, Facebook (Nov. 2019), available at <https://about.fb.com/wp-content/uploads/2021/09/Instagram-Teen-Annotated-Research-Deck-1.pdf>.

<sup>136</sup> Katie Benner, *How Snapchat is Shaping Social Media*, N.Y. Times (Nov. 30, 2016), available at <https://www.nytimes.com/2016/11/30/technology/how-snapchat-works.html>.

150. Snapchat started as a photo sharing platform that allows users to form groups and share photos, known as “snaps,” that disappear after being viewed by the recipients. Snapchat became well known for this self-destructing content feature. But Snapchat quickly evolved from only functioning as a photo-sharing app, as Snap made design changes and rapidly developed new features targeting teens, which ultimately increased Snapchat’s popularity among minors.

151. In 2012, Snapchat added video sharing capabilities, pushing the number of “snaps” to 50 million per day.<sup>137</sup> A year later, Snapchat added the “Stories” function, which allows users to upload a rolling compilation of snaps that the user’s connections can view for 24 hours.<sup>138</sup> The following year, Snapchat added a feature that enabled users to communicate with one another in real time “via text or video.”<sup>139</sup> It also added the “Our Story” feature, expanding on the original stories function by allowing users in the same location to add their photos and videos to a single publicly viewable content stream.<sup>140</sup> Snapchat also gave users the capability to add filters and

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<sup>137</sup> J.J. Colao, *Snapchat Adds Video, Now Seeing 50 Million Photos A Day*, Forbes (Dec. 14, 2012), available at <https://www.forbes.com/sites/jjcolao/2012/12/14/snapchat-adds-video-now-seeing-50-million-photos-a-day/?sh=55425197631b>.

<sup>138</sup> Ellis Hamburger, *Snapchat’s Next Big Thing: ‘Stories’ That Don’t Just Disappear*, Verge (Oct. 3, 2013), available at <https://www.theverge.com/2013/10/3/4791934/snapchats-next-big-thing-stories-that-dont-just-disappear>.

<sup>139</sup> Romain Dillet, *Snapchat Adds Ephemeral Text Chat and Video Calls*, TechCrunch (May 1, 2014), available at <https://techcrunch.com/2014/05/01/snapchat-adds-text-chat-and-video-calls/>.

<sup>140</sup> Laura Stampler, *Snapchat Just Unveiled a New Feature*, Time (June 17, 2014), available at <https://time.com/2890073/snapchat-new-feature/>.

graphic stickers onto photos showing a user's location, through a feature it refers to as "Geofilters."<sup>141</sup>

152. In 2015, Snapchat added a "Discover" feature that promotes videos from news outlets and other content creators.<sup>142</sup> Users can view content by scrolling through the Discover feed. After the selected video ends, Snapchat automatically plays other video content in a never ending stream until a user manually exits the stream.

153. In 2020, Snapchat added the "Spotlight" feature through which it serves users "an endless feed of user-generated content" Snapchat curates from the 300 million daily Snapchat users.<sup>143</sup>

154. Today Snapchat is one of the largest social media platforms in the world. By its own estimates, Snapchat has 363 million daily users, including 100 million daily users in North America.<sup>144</sup> Snapchat reaches 90 percent of people ages 13–24 in over twenty countries and reaches nearly half of all smartphone users in the United States.<sup>145</sup>

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<sup>141</sup> Angela Moscaritolo, *Snapchat Adds 'Geofilters' in LA, New York*, PC Mag. (July 15, 2014), available at <https://www.pcmag.com/news/snapchat-adds-geofilters-in-la-new-york>.

<sup>142</sup> Steven Tweedie, *How to Use Snapchat's New 'Discover' Feature*, Bus. Insider (Jan. 27, 2015), available at <https://www.businessinsider.com/how-to-use-snapchat-discover-feature-2015-1>.

<sup>143</sup> Salvador Rodriguez, *Snap is launching a competitor to TikTok and Instagram Reels*, CNBC (Nov. 23, 2020), available at <https://www.cnbc.com/2020/11/23/snap-launching-a-competitor-to-tiktok-and-instagram-reels.html>.

<sup>144</sup> October 2022 Investor Presentation at 5, Snap Inc. (Oct. 20, 2022), available at <https://investor.snap.com/events-and-presentations/presentations/default.aspx>.

<sup>145</sup> *Id.* at 6-7.

(1) *Snap Designs and Markets its Platform to Minors.*

155. Snapchat’s commercial success is due to its advertising. In 2014, Snap began running advertisements on Snapchat.<sup>146</sup> Since then, Snapchat’s business model has revolved around its advertising revenue, which has boomed. Snap now expects to generate \$4.86 billion in Snapchat advertising revenue for 2022.<sup>147</sup> 149. Snap specifically markets Snapchat to children ages 13–17 because they are a key demographic for Snap’s advertising business. Internal documents describe users between the ages of 13-34 as “critical” to Snap’s advertising success because of the common milestones achieved within that age range.<sup>148</sup>

157. In addition to its marketing, Snap has targeted a younger audience by designing Snapchat in a manner that older individuals find hard to use.<sup>149</sup> The effect of this design is that Snapchat is a platform where its young users are insulated from older users, including their teachers and their parents. Snap is well aware of this model, as Snap’s CEO boasts, “[w]e’ve made it very hard for parents to embarrass their children[.]”<sup>150</sup>

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<sup>146</sup> Sara Fischer, *A timeline of Snap’s advertising, from launch to IPO*, Axios (Feb. 3, 2017), available at <https://www.axios.com/2017/12/15/a-timeline-of-snaps-advertising-from-launch-to-ipo-1513300279>.

<sup>147</sup> Bhanvi Staija, *TikTok’s ad revenue to surpass Twitter and Snapchat combined in 2022*, Reuters (Apr. 11, 2022), available at <https://www.reuters.com/technology/tiktoks-ad-revenue-surpass-twitter-snapchat-combined-2022-report-2022-04-11/>.

<sup>148</sup> October 2022 Investor Presentation at 27, Snap Inc. (Oct. 20, 2022), available at <https://investor.snap.com/events-and-presentations/presentations/default.aspx>.

<sup>149</sup> See Hannah Kuchler & Tim Bradshaw, *Snapchat’s Youth Appeal Puts Pressure on Facebook*, Fin. Times (Aug. 21, 2017), available at <https://www.ft.com/content/07e4dc9e-86c4-11e7-bf50-e1c239b45787>.

<sup>150</sup> Max Chafkin & Sarah Frier, *How Snapchat Built a Business by Confusing Olds*, Bloomberg (Mar. 3, 2016), available at <https://www.bloomberg.com/features/2016-how-snapchat-built-a-business/>.

158. Snap also designed Snapchat in a way that enables minor users to hide content from their parents by ensuring that photos, videos, and chat messages quickly disappear. This design further insulates children from adult oversight.

159. Moreover, Snap added as a feature the ability for users to create cartoon avatars modeled after themselves.<sup>151</sup> By using an artform generally associated with and directed at younger audiences, Snap further designed Snapchat to attract teenagers and younger children.

160. In 2013, Snap also marketed Snapchat specifically to kids under 13 through a feature it named “SnapKidz.”<sup>152</sup> This feature—part of the Snapchat platform—allowed children under 13 to take photos, draw on them, and save them locally on the device.<sup>153</sup> Kids could also send these images to others or upload them to other social media sites.<sup>154</sup>

161. Although the SnapKidz feature was later discontinued and Snap claims to now prohibit users under the age of 13, its executives have admitted that its age verification “is effectively useless in stopping underage users from signing up to the Snapchat app.”<sup>155</sup> Snap’s purported safeguards are nothing more than a façade.

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<sup>151</sup> Kif Leswing, *Snapchat just introduced a feature it paid more than \$100 million for*, Bus. Insider (July 19, 2016), available at <https://www.businessinsider.com/snapchat-just-introduced-a-feature-it-paid-more-than-100-million-for-2016-7>.

<sup>152</sup> Larry Magid, *Snapchat Creates SnapKidz – A Sandbox for Kids Under 13*, Forbes (June 23, 2013), available at <https://www.forbes.com/sites/larrymagid/2013/06/23/snapchat-creates-snapkidz-a-sandbox-for-kids-under-13/?sh=7c682a555e5a>.

<sup>153</sup> *Id.*

<sup>154</sup> *Id.*

<sup>155</sup> Isobel Asher Hamilton, *Snapchat admits its age verification safeguards are effectively useless*, Bus. Insider (Mar. 19, 2019), available at <https://www.businessinsider.com/snapchat-says-its-age-verification-safeguards-are-effectively-useless-2019-3>.

162. Snap's efforts to attract young users have been successful. Teenagers consistently name Snapchat as a favorite social media platform. The latest figures show 13 percent of children ages 8-12 used Snapchat in 2021,<sup>156</sup> and almost 60 percent of children ages 13-17 use Snapchat.<sup>157</sup>

*(2) Snap Intentionally Designs and Markets Exploitative Methods to Increase the Time Users Spend on its Platform.*

163. Snap promotes excessive use of its platform through design features and manipulative algorithms intended to maximize users' screen time.

164. Snap has implemented inherently and intentionally exploitive features into Snapchat, including "Snapstreaks" (tracking and displaying how many consecutive days two users reply to each other), various trophies and reward systems, quickly disappearing messages, and filters. Snap designed these features, along with others, to maximize the amount of time users spend on its platform.

165. Snaps are intended to manipulate users by activating the rule of reciprocity.<sup>158</sup> Whenever a user gets a snap, they feel obligated to send a return snap. Snapchat tells users each time they receive a snap by pushing a notification to the recipient's cellphone. These notifications are designed to motivate users to open Snapchat and view content, increasing the amount of time

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<sup>156</sup> Victoria Rideout et al., *Common Sense Census: Media use by tweens and teens*, 2021 at 5, Common Sense Media (2022), available at [https://www.commonsensemedia.org/sites/default/files/research/report/8-18-census-integrated-report-final-web\\_0.pdf](https://www.commonsensemedia.org/sites/default/files/research/report/8-18-census-integrated-report-final-web_0.pdf).

<sup>157</sup> Emily Vogels et al., *Teens, Social Media and Technology 2022*, Pew Rsch. Ctr. (Aug. 10, 2022), <https://www.pewresearch.org/internet/2022/08/10/teens-social-media-and-technology-2022/>.

<sup>158</sup> Nir Eyal, *The Secret Psychology of Snapchat*, Nir & Far (Apr. 14, 2015), <https://www.nirandfar.com/psychology-of-snapchat/>.

users spend on Snapchat. Further, because snaps disappear within ten seconds of being viewed, users feel compelled to reply immediately. This disappearing nature of snaps is a defining characteristic of Snapchat and intended to keep users on the platform.

166. Snap also keeps users coming back to the Snapchat platform through the “Snapstreaks” feature.<sup>159</sup> A “streak” is a counter within Snapchat that tracks how many consecutive days two users have sent each other snaps. If a user fails to snap the other user within 24 hours, the streak ends. Snap adds extra urgency by putting an hourglass emoji next to a friend’s name if a Snapchat streak is about to end.<sup>160</sup> This design implements a system where a user must “check constantly or risk missing out.”<sup>161</sup> And this feature is particularly effective on teenage and minor users. “For teens in particular, streaks are a vital part of using the app, and of their social lives as a whole.”<sup>162</sup> Some children become so obsessed with maintaining a Snapstreak that they

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<sup>159</sup> See Avery Hartmans, *These are the sneaky ways apps like Instagram, Facebook, Tinder lure you in and get you ‘addicted’*, Bus. Insider (Feb. 17 2018), available at <https://www.businessinsider.com/how-app-developers-keep-us-addicted-to-our-smartphones-2018-1#snapchat-uses-snapstreaks-to-keep-you-hooked-13>; see generally Virginia Smart & Tyana Grundig, *‘We’re designing minds’: Industry insider reveals secrets of addictive app trade*, CBC (Nov. 3, 2017), available at <https://www.cbc.ca/news/science/marketplace-phones-1.4384876>; Julian Morgans, *The Secret Ways Social Media is Built for Addiction*, Vice (May 17, 2017), available at <https://www.vice.com/en/article/vv5jkb/the-secret-ways-social-media-is-built-for-addiction>.

<sup>160</sup> Lizette Chapman, *Inside the Mind of a Snapchat Streaker*, Bloomberg (Jan. 30, 2017), available at <https://www.bloomberg.com/news/features/2017-01-30/inside-the-mind-of-a-snapchat-streaker>.

<sup>161</sup> *Id.*

<sup>162</sup> Avery Hartmans, *These are the sneaky ways apps like Instagram, Facebook, Tinder lure you in and get you ‘addicted’*, Bus. Insider (Feb. 17 2018), available at <https://www.businessinsider.com/how-app-developers-keep-us-addicted-to-our-smartphones-2018-1#snapchat-uses-snapstreaks-to-keep-you-hooked-13>; see generally Cathy Becker, *Experts warn parents how Snapchat can hook in teens with streaks*, ABC News (July 27, 2017), available

give their friends access to their accounts when they may be away from their phone for a day or more, such as on vacation.<sup>163</sup>

167. Snap also designed features that operate on IVR principles to maximize the time users are on its platform. The “rewards” come in the form of a user’s “Snapscore” (increases with each snap a user sends and receives) and other signals of recognition similar to “likes” used in other platforms. The increase in Snapscore and other trophies and charms users can earn by using the app operate on variable reward patterns. Like Snapstreaks, these features are designed to incentivize sending snaps and increase the amount of time users spend on Snapchat.

168. Snap also designs photo and video filters and lenses, which are central to Snapchat’s function. Snap designed its filters and lenses in a way to further maximize the amount of time users spend on Snapchat. One way Snap uses its filters to hook minor users is by creating temporary filters that impose a sense of urgency to use them before they disappear. Another way Snap designed its filters to increase screen use is by gamification.<sup>164</sup> Many filters include games, creating competition between users by sending each other snaps with scores. Snap also tracks data on the most commonly used filters and develops new filters based on this data.<sup>165</sup> Snap

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at <https://abcnews.go.com/Lifestyle/experts-warn-parents-snapchat-hook-teens-streaks/story?id=48778296>.

<sup>163</sup> Caroline Knorr, *How to resist technology addiction*, CNN (Nov. 9, 2017), available at <https://www.cnn.com/2017/11/09/health/science-of-tech-obsession-partner/index.html>; Jon Brooks, *7 Specific Tactics Social Media Companies Use to Keep You Hooked*, KQED (June 9, 2017), available at <https://www.kqed.org/futureofyou/397018/7-specific-ways-social-media-companies-have-you-hooked>.

<sup>164</sup> Josh Constine, *Now Snapchat Has ‘Filter Games’*, TechCrunch (Dec. 23, 2016), available at <https://techcrunch.com/2016/12/23/snapchat-games/>.

<sup>165</sup> *How We Use Your Information*, Snap Inc., available at <https://snap.com/en-US/privacy/your-information> (last visited Dec. 8, 2022).



personalizes filters to further entice individuals to use Snapchat more.<sup>166</sup> Snap designs and modifies these filters to maximize the amount of time users spend on Snapchat.

(3) *Snap's Algorithms are Manipulative and Harmful.*

169. Snap also uses complex algorithms to suggest friends to users and recommend content in order to keep users using Snapchat.

170. Snap notifies users based on an equation Snap uses to determine whether to suggest a user add someone else as a friend on Snapchat. This is known as “Quick Add.” By using an algorithm to suggest friends to users, Snapchat increases the odds users will add additional friends, send additional snaps, and spend more time on Snapchat.

171. Snapchat also utilizes “Discover” and “Spotlight” features that use algorithms to suggest content to users. The “Discover” feature includes content from news and other media outlets.<sup>167</sup> A user’s “Discover” content is populated by an algorithm, and constantly changes depending on how a user interacts with the content.<sup>168</sup> Similarly, the “Spotlight” feature promotes popular videos from other Snapchat users and is based on an algorithm that determines whether a user has positively or negatively engaged with similar content.<sup>169</sup> Snap programs its algorithms to

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<sup>166</sup> *Id.*

<sup>167</sup> Steven Tweedie, *How to Use Snapchat's New 'Discover' Feature*, Bus. Insider (Jan. 27, 2015), available at <https://www.businessinsider.com/how-to-use-snapchat-discover-feature-2015-1>.

<sup>168</sup> *How We Use Your Information*, Snap Inc., <https://snap.com/en-US/privacy/your-information> (last visited Dec. 8, 2022).

<sup>169</sup> Sara Fischer, *Snapchat launches Spotlight, a TikTok competitor*, Axios (Nov. 23, 2020), available at <https://www.axios.com/2020/11/23/snapchat-launches-spotlight-tiktok-competitor;https://snap.com/en-US/privacy/your-information>.

push content to users that will keep them engaged on Snapchat and, thereby, increase the amount of time users spend on Snapchat, worsening their mental health.

*(4) Snap's Conduct in Designing and Operating its Platform has Harmed Youth Mental Health.*

172. The way in which Snap has designed and operated Snapchat has caused minors to suffer increased anxiety, depression, disordered eating, cyberbullying, and sleep deprivation.

173. Snap is aware Snapchat is harming children because, as alleged above, Snap intentionally designed Snapchat to maximize engagement by preying on the psychology of children through its use of algorithms and other features including Snapstreaks, various trophies and reward systems, quickly disappearing messages, filters, and games.

174. Snap reasonably should know that its conduct has negatively affected youth. Snap's conduct has been the subject of inquiries by the United States Senate regarding Snapchat's use "to promote bullying, worsen eating disorders, and help teenagers buy dangerous drugs or engage in reckless behavior."<sup>170</sup> Further, Senators from across the ideological spectrum have introduced bills that would ban many of the features Snapchat uses, including badges and other awards recognizing a user's level of engagement with the platform.<sup>171</sup> Despite these calls for oversight

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<sup>170</sup> Bobby Allyn, *4 Takeaways from the Senate child safety hearing with YouTube, Snapchat and TikTok*, Nat'l Pub. Radio (Oct. 26, 2021), available at <https://www.npr.org/2021/10/26/1049267501/snapchat-tiktok-youtube-congress-child-safety-hearing>.

<sup>171</sup> See Abigail Clukey, *Lawmaker Aims To Curb Social Media Addiction With New Bill*, Nat'l Pub. Radio (Aug. 3, 2019), available at <https://www.npr.org/2019/08/03/747086462/lawmaker-aims-to-curb-social-media-addiction-with-new-bill>; Social Media Addiction Reduction Technology Act, S. 2314, 116th Cong. (2019); Kids Internet Design and Safety Act, S. 2918, 117th Cong. (2021).

from Congress, Snap has failed to limit or stop its use of streaks, badges, and other awards that recognize and promote users' level of engagement with Snapchat.

175. Snap also knows or should know of Snapchat's other negative effects on minors because of widely available published research findings. For instance, the Journal of the American Medical Association has recognized that Snapchat's effect on how young people view themselves is so severe, that it named a new disorder, "Snapchat dysmorphia," after the platform.<sup>172</sup> This disorder describes people, usually young women, seeking plastic surgery to make themselves look like the way they do through Snapchat filters.<sup>173</sup> The rationale underlying this disorder is that beauty filters on social media, like Snapchat, create a "sense of unattainable perfection" that is alienating and damaging to a person's self-esteem.<sup>174</sup> One social psychologist summed the effect as "the pressure to present a certain filtered image on social media can certainly play into [depression and anxiety] for younger people who are just developing their identities."<sup>175</sup>

176. Despite knowing Snapchat harms its young users, Snap continues to update and add features intentionally designed to maximize the amount of time users spend on Snapchat. Snap continues its harmful conduct because its advertising revenue relies on Snapchat's users consuming large volumes of content on its platform.

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<sup>172</sup> *Snapchat Dysmorphia': When People Get Plastic Surgery To Look Like A Social Media Filter*, WBUR (Aug 29, 2018), available at <https://www.wbur.org/hereandnow/2018/08/29/snapchat-dysmorphia-plastic-surgery>.

<sup>173</sup> *Id.*

<sup>174</sup> Nathan Smith & Allie Yang, *What happens when lines blur between real and virtual beauty through filters*, ABC News (May 1, 2021), available at <https://abcnews.go.com/Technology/lines-blur-real-virtual-beauty-filters/story?id=77427989>.

<sup>175</sup> *Id.*

*c. TikTok Intentionally Marketed to and Designed its Social Media Platform for Minor Users and has Substantially Contributed to the Youth Mental Health Crisis.*

(1) *TikTok's Platform*

177. TikTok is a social media platform that describes itself as “the leading destination for short-form mobile video.”<sup>176</sup> According to TikTok, it is primarily a platform where users “create and watch short-form videos.”<sup>177</sup>

178. TikTok’s predecessor, Musical.ly, launched in 2014 as a place where people could create and share 15-second videos of themselves lip-syncing or dancing to their favorite music.<sup>178</sup>

179. In 2017, ByteDance launched an international version of a platform similar to Musical.ly that also enabled users to create and share short lip-syncing videos, which it called TikTok.<sup>179</sup>

180. That same year, ByteDance acquired Musical.ly to leverage its young user base in the United States of almost 60 million monthly active users.<sup>180</sup>

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<sup>176</sup> About: Our Mission, TikTok, <https://www.tiktok.com/about> (last visited Dec. 8, 2022).

<sup>177</sup> Protecting Kids Online: Snapchat, TikTok, and YouTube: Hearing Before the Subcomm. On Consumer Protection, Product Safety, and Data Security, 117 Cong. (2021) (statement of Michael Beckerman, VP and Head of Public Policy, Americas, TikTok).

<sup>178</sup> Biz Carson, *How a failed education startup turned into Musical.ly, the most popular app you’ve probably never heard of*, Bus. Insider (May, 28, 2016), available at <https://www.businessinsider.com/what-is-musically-2016-5>.

<sup>179</sup> Paresh Dave, *China’s ByteDance scrubs Musical.ly brand in favor of TikTok*, Reuters (Aug. 1, 2018), available at <https://www.reuters.com/article/us-bytedance-musically/chinas-bytedance-scrubs-musical-ly-brand-in-favor-of-tiktok-idUSKBN1KN0BW>.

<sup>180</sup> Liza Lin & Rolfe Winkler, *Social-Media App Musical.ly Is Acquired for as Much as \$1 Billion; With 60 million monthly users, startup sells to Chinese maker of news app Toutiao*, Wall St. J. (Nov. 10, 2017), available at <https://www.wsj.com/articles/lip-syncing-app-musical-ly-is-acquired-for-as-much-as-1-billion-1510278123>.

181. Months later, the apps were merged under the TikTok brand.<sup>181</sup>

182. Since then, TikTok has expanded the length of time for videos from 15-seconds to up to 10 minutes;<sup>182</sup> created a fund that was expected to grow to over \$1 billion within three years to incentivize users to create videos that even more people will watch;<sup>183</sup> and had users debut their own songs, share comedy skits,<sup>184</sup> and “challenge” others to perform an activity.<sup>185</sup>

183. TikTok marketed and designed its platform to enable endless scrolling.

184. “[O]ne of the defining features of the TikTok platform,” is its “For You” feed.<sup>186</sup> There, users are served with an unending stream of videos TikTok curates for them based on complex, machine-learning algorithms intended to keep users on its platform. TikTok itself describes the feed as “central to the TikTok experience and where most of our users spend their time.”<sup>187</sup> The New York Times described it like this:

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<sup>181</sup> Paresh Dave, *China’s ByteDance scrubs Musical.ly brand in favor of TikTok*, Reuters (Aug. 1, 2018), available at <https://www.reuters.com/article/us-bytedance-musically/chinas-bytedance-scrubs-musical-ly-brand-in-favor-of-tiktok-idUSKBN1KN0BW>.

<sup>182</sup> Andrew Hutchinson, *TikTok Confirms that 10 Minute Video Uploads are Coming to All Users*, SocialMediaToday (Feb. 28, 2022), available at <https://www.socialmediatoday.com/news/tiktok-confirms-that-10-minute-video-uploads-are-coming-to-all-users/619535/>.

<sup>183</sup> Vanessa Pappas, *Introducing the \$200M TikTok Creator Fund*, TikTok (July 29, 2021), available at <https://newsroom.tiktok.com/en-us/introducing-the-200-million-tiktok-creator-fund>.

<sup>184</sup> Joseph Steinberg, *Meet Musical.ly, the Video Social Network Quickly Capturing the Tween and Teen Markets*, Inc. (June 2, 2016), available at <https://www.inc.com/joseph-steinberg/meet-musically-the-video-social-network-quickly-capturing-the-tween-and-teen-m.html>.

<sup>185</sup> John Herrman, *How TikTok is Rewriting the World*, N.Y. Times (Mar. 10, 2019), available at <https://www.nytimes.com/2019/03/10/style/what-is-tik-tok.html>.

<sup>186</sup> *How TikTok recommends videos #ForYou*, TikTok (June 18, 2020), available at <https://newsroom.tiktok.com/en-us/how-tiktok-recommends-videos-for-you>.

<sup>187</sup> *Id.*

It's an algorithmic feed based on videos you've interacted with, or even just watched. It never runs out of material. It is not, unless you train it to be, full of people you know, or things you've explicitly told it you want to see. It's full of things that you seem to have demonstrated you want to watch, no matter what you actually say you want to watch.<sup>188</sup>

185. The "For You" feed has quickly garnered TikTok hundreds of millions of users. Since 2018, TikTok has grown from 271 million global users to more than 1 billion global monthly users as of September 2021.<sup>189</sup>

(2) *TikTok Markets its Platform to Minors*

186. TikTok has built its business plan around advertising revenue, which has flourished. In 2022, TikTok is projected to receive \$11 billion in advertising revenue, over half of which is expected to come from the United States.<sup>190</sup>

187. TikTok, since its beginning as Musical.ly, has been designed and developed with minors in mind.

188. Alex Zhu and Louis Yang, the co-founders of Musical.ly, raised \$250,000 to build an app that experts could use to create short, three- to five-minute videos explaining a subject.<sup>191</sup>

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<sup>188</sup> John Herrman, *How TikTok is Rewriting the World*, N.Y. Times (Mar. 10, 2019), available at <https://www.nytimes.com/2019/03/10/style/what-is-tik-tok.html>.

<sup>189</sup> Jessica Bursztynsky, *TikTok says 1 billion people use the app each month*, CNBC (Sept. 27, 2021), available at <https://www.cnn.com/2021/09/27/tiktok-reaches-1-billion-monthly-users.html>.

<sup>190</sup> Bhanvi Staija, *TikTok's ad revenue to surpass Twitter and Snapchat combined in 2022*, Reuters (Apr. 11, 2022), available at <https://www.reuters.com/technology/tiktoks-ad-revenue-surpass-twitter-snapchat-combined-2022-report-2022-04-11/>.

<sup>191</sup> Biz Carson, *How a failed education startup turned into [Musical.ly](https://www.musical.ly), the most popular app you've probably never heard of*, Bus. Insider (May 28, 2016), available at <https://www.businessinsider.com/what-is-musically-2016-5>.

The day they released the app, Zhu said they knew “[i]t was doomed to be a failure,” because “[i]t wasn’t entertaining, and it didn’t attract teens.”<sup>192</sup>

189. According to Zhu, he stumbled upon the idea that would come to be TikTok while observing teens on a train, half of whom were listening to music while the other half took selfies or videos and shared the results with friends.<sup>193</sup> “That’s when Zhu realized he could combine music, videos, and a social network to attract the early-teen demographic.”<sup>194</sup>

190. Zhu and Yang thereafter developed the short-form video app that is now known as TikTok.

191. TikTok was marketed to minors in its design and content. For example, the Federal Trade Commission (“FTC”) alleged that the app initially centered around a child-oriented activity (i.e., lip syncing); featured music by celebrities that then appealed primarily to teens and tweens, such as Selena Gomez and Ariana Grande; labelled folders with names meant to appeal to youth, such as “Disney” and “school”; included songs in such folders related to Disney television shows and movies, such as “Can You Feel the Love Tonight” from the movie “The Lion King” and “You’ve Got a Friend in Me” from the movie “Toy Story,” and songs covering school-related subjects or school-themed television shows and movies.<sup>195</sup>

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<sup>192</sup> *Id.*

<sup>193</sup> *Id.*

<sup>194</sup> *Id.*

<sup>195</sup> Complaint for Civil Penalties, Permanent Injunction, and Other Equitable Relief (“[Musical.ly Complaint](#)”) at p. 8, ¶¶ 26–27, *United States v. Musical.ly*, 2:19-cv-01439-ODW-RAO (C.D. Cal. Feb. 27, 2019) Dkt. # 1.

192. The target demographic was also reflected in the sign-up process. In 2016, the birthdate for those signing up for the app defaulted to the year 2000 (i.e., 16 years old).<sup>196</sup>

193. TikTok also cultivated a younger demographic in unmistakable, covert ways. In 2020, The Intercept reported on a document TikTok prepared for its moderators instructing the moderators that videos of “senior people with too many wrinkles” are disqualified for the “For You” feed because that would make “the video . . . much less attractive [and] not worth[] . . . recommend[ing.]”<sup>197</sup>

194. In December 2016, Zhu confirmed the company had actual knowledge that “a lot of the top users are under 13.”<sup>198</sup>

195. The FTC alleged that despite the company’s knowledge of these top users under 13 and a “significant percentage” of other users who were under 13, the company failed to comply with the COPPA.<sup>199</sup>

196. TikTok settled those claims in 2019 by agreeing to pay what was then the largest ever civil penalty under COPPA and to several forms of injunctive relief.<sup>200</sup>

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<sup>196</sup> Melia Robinson, *How to use [Musical.ly](https://www.businessinsider.com/how-to-use-musically-app-2016-12), the app with 150 million users that teens are obsessed with*, Bus. Insider (Dec. 7, 2016), available at <https://www.businessinsider.com/how-to-use-musically-app-2016-12>.

<sup>197</sup> Sam Biddle et al., *Invisible Censorship: TikTok Told Moderators to Suppress Posts by “Ugly” People and the Poor to Attract New Users*, Intercept (Mar. 15, 2020), available at <https://theintercept.com/2020/03/16/tiktok-app-moderators-users-discrimination/>

<sup>198</sup> Jon Russell, *Muscal.ly defends its handling of young users, as it races past 40M MAUs* at 8:58–11:12, TechCrunch (Dec. 6, 2016), available at <https://techcrunch.com/2016/12/06/musically-techcrunch-disrupt-london/>.

<sup>199</sup> See generally [Musical.ly](#) Complaint, ¶19.

<sup>200</sup> Lesley Fair, *Largest FTC COPPA settlement requires [Musical.ly](https://www.ftc.gov/business-guidance/blog/2019/02/largest-ftc-coppa-settlement-requires-musically-change-its-tune) to change its tune*, FTC (Feb. 27, 2019), available at <https://www.ftc.gov/business-guidance/blog/2019/02/largest-ftc-coppa-settlement-requires-musically-change-its-tune>.



197. In an attempt to come into compliance with the consent decree and COPPA, TikTok made available to users under 13 what it describes as a “limited, separate app experience.”<sup>201</sup> The child version of TikTok restricts users from posting videos through the app. Children can still, however, record and watch videos on TikTok.<sup>202</sup> For that reason, experts fear the app is “designed to fuel [children’s] interest in the grown-up version.”<sup>203</sup>

198. The aforementioned ways TikTok markets to and obtained a young user base are manifestations of Zhu’s views about the importance of user engagement to growing TikTok. Zhu explained the target demographic to The New York Times: “[T]eenage culture doesn’t exist” in China because “teens are super busy in school studying for tests, so they don’t have the time and luxury to play social media apps.”<sup>204</sup> By contrast, Zhu describes “[t]eenagers in the U.S. [as] a golden audience.”<sup>205</sup>

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<sup>201</sup> Dami Lee, *TikTok stops young users from uploading videos after FTC settlement*, Verge (Feb. 27, 2019), available at <https://www.theverge.com/2019/2/27/18243510/tiktok-age-young-user-videos-ftc-settlement-13-childrens-privacy-law>.

<sup>202</sup> *Id.*

<sup>203</sup> Leonard Sax, *Is TikTok Dangerous for Teens?*, Inst. Fam. Stud. (Mar. 29, 2022), available at <https://ifstudies.org/blog/is-tiktok-dangerous-for-teens->.

<sup>204</sup> Paul Mozur, *Chinese Tech Firms Forced to Choose Market: Home or Everywhere Else*, N.Y. Times (Aug. 9, 2016), available at <https://www.nytimes.com/2016/08/10/technology/china-homegrown-internet-companies-rest-of-the-world.html>.

<sup>205</sup> *Id.*

199. TikTok’s efforts to attract young users have been successful. That is why 67% percent of children ages 13-17 report having used TikTok, and 16% say they use it almost constantly.<sup>206</sup>

(3) *TikTok Intentionally Maximizes the Time Users Spend on its Platform.*

200. TikTok developed and marketed features that exploit the brains of minors such as IVRs and reciprocity to maximize the time users spend on TikTok.

201. TikTok employs design elements and complex algorithms to simulate variable reward patterns in a flow-inducing stream of short-form videos intended to captivate its user’s attention for as long as possible.

202. TikTok drives habitual use of its platform using design elements that operate on principles of IVR. For example, TikTok designed its platform to allow users to like and reshare videos. Those features serve as rewards for users who create content on the platform. Receiving a like or reshare indicates that others approve of that user’s content and satisfies their natural desire for acceptance.<sup>207</sup> Studies have shown that “likes” activate the reward region of the brain.<sup>208</sup> The

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<sup>206</sup> Emily Vogels et al., *Teens, Social Media and Technology 2022*, Pew Rsch. Ctr. (Aug. 10, 2022), available at <https://www.pewresearch.org/internet/2022/08/10/teens-social-media-and-technology-2022/>.

<sup>207</sup> See, e.g., Lauren E. Sherman et al., *The Power of the Like in Adolescence: Effects of Peer Influence on Neural and Behavioral Responses to Social Media*, 27(7) Psych. Sci. 1027–35 (July 2016), available at <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5387999/>.

<sup>208</sup> *Id.*

release of dopamine in response to likes creates a positive feedback loop.<sup>209</sup> Users will repeatedly return to TikTok in hope of another pleasurable experience.<sup>210</sup>

203. TikTok also uses reciprocity to manipulate users to use the platform. TikTok invokes reciprocity through features like “Duet” which allows users to post a video side-by-side with a video from another TikTok user. “Duet” functions as a way for users to post reactions to the videos of TikTok content creators. The response is intended to provoke a reciprocal response from the creator of the original video.

204. TikTok offers video filters, lenses, and music, which are intended to keep users on its platform. TikTok has gamified its platform through “challenges.” These challenges are essentially campaigns in which users compete to perform a specific task. By fostering competition, TikTok incentivizes users to use its platform more frequently.

205. TikTok’s defining feature, the “For You” feed, is a curated, endless stream of short-form videos intended to keep users on its platform, longer. In that way, TikTok feeds users beyond the point they are satiated. The ability to scroll ad infinitum, coupled with the variable reward pattern of TikTok induces a flow-like state for users that distorts their sense of time.<sup>211</sup> The “For You” feed is yet another way TikTok increases the time users spend on its platform.

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<sup>209</sup> Rasan Burhan & Jalal Moradzadeh, *Neurotransmitter Dopamine (DA) and its Role in the Development of Social Media Addiction*, 11(7) J. Neurology & Neurophysiology 507 (2020), available at <https://www.iomcworld.org/open-access/neurotransmitter-dopamine-da-and-its-role-in-the-development-of-social-media-addiction.pdf>.

<sup>210</sup> *Id.*

<sup>211</sup> Christian Montag et al., *Addictive Features of Social Media/Messenger Platforms and Freemium Games against the Background of Psychological and Economic Theories*, 16(14) Int’l J. Env’t Rsch. & Pub. Health 2612 (July 23, 2019), available at <https://doi.org/10.3390/ijerph16142612>.

(4) *TikTok's Algorithms are Manipulative.*

206. The first thing a user sees when they open TikTok is the “For You” feed, even if they have never posted anything, followed anyone, or liked a video.<sup>212</sup>

207. The “For You” page presents users with a “stream of videos” TikTok claims are “curated to [each user’s] interests.”<sup>213</sup>

208. According to TikTok, it populates each user’s “For You” feed by “ranking videos based on a combination of factors,” that include, among others, any interests expressed when a user registers a new account, videos a user likes, accounts they follow, hashtags, captions, sounds in a video they watch, and certain device settings, such as their language preferences and where they are located.<sup>214</sup>

209. Importantly, some factors weigh heavier than others. To illustrate, TikTok explains that an indicator of interest, such as “whether a user finishes watching a longer video from beginning to end, would receive greater weight than a weak indicator, such as whether the video’s viewer and creator are both in the same country.”<sup>215</sup>

210. TikTok claims it ranks videos in this way because the length of time a user spends watching a video is a “strong indicator of interest[.]”<sup>216</sup>

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<sup>212</sup> Brian Feldman, *TikTok is Not the Internet’s Eden*, N.Y. Mag. (Mar. 16, 2020), available at <https://nymag.com/intelligencer/2020/03/tiktok-didnt-want-you-to-see-ugly-or-poor-people-on-its-app.html>.

<sup>213</sup> *How TikTok recommends videos #ForYou*, TikTok (June 18, 2020), available at <https://newsroom.tiktok.com/en-us/how-tiktok-recommends-videos-for-you>.

<sup>214</sup> *Id.*

<sup>215</sup> *Id.*

<sup>216</sup> *Id.*

211. Zhu offered a different explanation. Zhu repeatedly told interviewers that he was “focused primarily on increasing the engagement of existing users.”<sup>217</sup> “Even if you have tens of millions of users,” Zhu explained, “you have to keep them always engaged.”<sup>218</sup>

212. The decisions TikTok made in programming/creating its algorithms are intended to do just that, as TikTok candidly explained in an internal document titled, “TikTok Algo 101.” The document, which TikTok has confirmed is authentic, “explains frankly that in the pursuit of the company’s ‘ultimate goal’ of adding daily active users, it has chosen to optimize for two closely related metrics in the stream of videos it serves: ‘retention’ — that is, whether a user comes back and ‘time spent.’”<sup>219</sup>

213. This system means that watch time is key.”<sup>220</sup> Guillaume Chaslot, founder of Algo Transparency, who reviewed the document at the request of the New York Times, explained that “rather than giving [people] what they really want,” TikTok’s “algorithm tries to get people addicted[.]”<sup>221</sup>

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<sup>217</sup> Joseph Steinberg, *Meet [Musical.ly](https://www.musical.ly), the Video Social Network Quickly Capturing the Tween and Teen Markets*, Inc. (June 2, 2016), available at <https://www.inc.com/joseph-steinberg/meet-musically-the-video-social-network-quickly-capturing-the-tween-and-teen-m.html>.

<sup>218</sup> Biz Carson, *How a failed education startup turned into [Musical.ly](https://www.musical.ly), the most popular app you’ve probably never heard of*, Bus. Insider (May 28, 2016), available at <https://www.businessinsider.com/what-is-musically-2016-5> (emphasis added).

<sup>219</sup> Ben Smith, *How TikTok Reads Your Mind*, N.Y. Times (Dec. 5, 2021), available at <https://www.nytimes.com/2021/12/05/business/media/tiktok-algorithm.html>.

<sup>220</sup> *Id.*

<sup>221</sup> *Id.*

214. The algorithm, along with the design elements, condition users through reward-based learning processes to facilitate the formation of habit loops that encourage excessive use.

215. The end result is that TikTok uses “a machine-learning system that analyzes each video and tracks user behavior so that it can serve up a continually refined, never-ending stream of TikToks optimized to hold [user’s] attention.”<sup>222</sup>

(5) *TikTok’s Conduct in Designing and Operating its Platform has Harmed the Mental Health of Minors.*

216. TikTok’s decision to design, market, and program its algorithm to prioritize user engagement causes harmful and exploitive content to be amplified to the youth market it has cultivated.

217. According to the Integrity Institute, a nonprofit of engineers, product managers, data scientists, and others, prioritizing user engagement amplifies misinformation on TikTok (and other platforms).<sup>223</sup> That pattern, the Integrity Institute notes, is “true for a broad range of harms,” such as hate speech and self-harm content, in addition to misinformation.<sup>224</sup>

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<sup>222</sup> Jia Tolentino, *How TikTok Holds Our Attention*, New Yorker (Sept. 30, 2019), available at <https://www.newyorker.com/magazine/2019/09/30/how-tiktok-holds-our-attention>.

<sup>223</sup> Misinformation Amplification Analysis and Tracking Dashboard, Integrity Inst. (Oct. 13, 2022), available at <https://integrityinstitute.org/our-ideas/hear-from-our-fellows/misinformation-amplification-tracking-dashboard>; see also Steven Lee Myers, *How Social Media Amplifies Misinformation More Than Information*, N.Y. Times (Oct. 13, 2022), available at <https://www.nytimes.com/2022/10/13/technology/misinformation-integrity-institute-report.html>.

<sup>224</sup> *Misinformation Amplification Analysis and Tracking Dashboard*, Integrity Inst. (Oct. 13, 2022), available at <https://integrityinstitute.org/our-ideas/hear-from-our-fellows/misinformation-amplification-tracking-dashboard>.

218. The Integrity Institute’s analysis builds on a premise Mark Zuckerberg (hereinafter “Zuckerberg”), the CEO of Facebook, described as the “Natural Engagement Pattern.”<sup>225</sup>

219. According to Zuckerberg “no matter where we draw the lines for what is allowed, as a piece of content gets close to that line, people will engage with it more on average[.]”<sup>226</sup>

220. This has important implications for platform design, as the Integrity Institute explains:

[W]hen platforms use machine learning models to predict user engagement on content, we should expect the predicted engagement to follow the actual engagement. When those predictions are used to rank and recommend content, specifically when a higher predicted engagement score means the content is more likely to be recommended or placed at the top of feeds, then we expect that misinformation will be preferentially distributed and amplified on the platform.<sup>227</sup>

221. Put differently, if you use past engagement to predict future engagement, as TikTok does, you are most likely to populate users “For You” feed with harmful content.

222. The Integrity Institute tested its theory by analyzing a category of harmful content: misinformation. Specifically, the Integrity Institute compared the amount of engagement (e.g., number of views) a post containing misinformation received as compared to prior posts from the same content creator.<sup>228</sup>

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<sup>225</sup> Mark Zuckerberg, *A Blueprint for Content Governance and Enforcement*, Facebook (May 5, 2021), available at <https://www.facebook.com/notes/751449002072082/>.

<sup>226</sup> *Id.*

<sup>227</sup> *Misinformation Amplification Analysis and Tracking Dashboard*, Integrity Inst. (Oct. 13, 2022), available at <https://integrityinstitute.org/our-ideas/hear-from-our-fellows/misinformation-amplification-tracking-dashboard>.

<sup>228</sup> *Id.*

223. For example, a TikTok user's historical posts received on average 75,000 views. When that same user posted a false statement (as determined by the International Fact Checking Network), the post received 775,000 views. In this case, TikTok amplified the misinformation 10 times more than this user's typical content.<sup>229</sup>

224. After analyzing many other posts from other users, the Integrity Institute found that TikTok on average amplified misinformation 29 times more than other content.<sup>230</sup>

225. A separate investigation by NewsGuard found TikTok's search algorithm similarly amplified misinformation. TikTok's search engine, like its "For You" feed, is a favorite among youth, with 40 percent preferring it (and Instagram) over Google.<sup>231</sup> Unfortunately, NewsGuard found that 1 in 5 of the top 20 TikTok search results on prominent news topics, such as school shootings and COVID vaccines, contain misinformation.<sup>232</sup>

226. Misinformation is just one type of harmful content TikTok amplifies to its young users. Investigations by *The Wall Street Journal* found TikTok inundated young users with videos about depression, self-harm, drugs, and extreme diets, among other harmful content.

227. In one investigation, *The Wall Street Journal* found TikTok's algorithm quickly pushed users down rabbit holes where they were more likely to encounter harmful content. *The Wall Street Journal* investigated how TikTok's algorithm chose what content to promote to users

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<sup>229</sup> *Id.*

<sup>230</sup> *Id.*

<sup>231</sup> Wanda Pogue, *Move Over Google. TikTok is the Go-To Search Engine for Gen Z*, Adweek (Aug. 4, 2022), available at <https://www.adweek.com/social-marketing/move-over-google-tiktok-is-the-go-to-search-engine-for-gen-z/>.

<sup>232</sup> Jack Brewster et al., *Misinformation Monitor*, NewsGuard (Sept. 2022), available at <https://www.newsguardtech.com/misinformation-monitor/september-2022/>.



by having 100 bots scroll through the “For You” feed.<sup>233</sup> Each bot was programmed with interests, such as extreme sports, forestry, dance, astrology, and animals.<sup>234</sup> Those interests were not disclosed in the process of registering their accounts.<sup>235</sup> Rather, the bots revealed their interests through their behaviors, specifically the time they spent watching the videos TikTok recommended to them. Consistent with TikTok’s internal “Algo 101” document, *The Wall Street Journal* found that time spent watching videos to be “the most impactful data on [what] TikTok serves you.”<sup>236</sup>

228. Over the course of 36 minutes, one bot watched 224 videos, lingering over videos with hashtags for “depression” or “sad.”<sup>237</sup> From then on, 93 percent of the videos TikTok showed this account were about depression or sadness.<sup>238</sup>

229. That is the rule, not an exception. Guillaume Chaslot (“Chaslot”), a former engineer for Google who worked on the algorithm for YouTube and the founder of AlgoTransparency, explained that 90-95 percent of the content users see on TikTok is based on its algorithm.<sup>239</sup>

230. “Even bots with general mainstream interests got pushed to the margin as recommendations got more personalized and narrow.”<sup>240</sup> Deep in these rabbit holes, *The Wall*

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<sup>233</sup> *Inside TikTok’s Algorithm: A WSJ Video Investigation*, Wall St. J. (July 21, 2021), available at <https://www.wsj.com/articles/tiktok-algorithm-video-investigation-11626877477>.

<sup>234</sup> *Id.*

<sup>235</sup> *Id.*

<sup>236</sup> *Id.*

<sup>237</sup> *Id.*

<sup>238</sup> *Id.*

<sup>239</sup> *Id.*

<sup>240</sup> *Id.*

*Street Journal* found “users are more likely to encounter potential harmful content.”<sup>241</sup> For example, one video *The Wall Street Journal* found encouraged suicide, urging the user to “Just go. Leave. Stop trying. Stop pretending. You know it and so do they. Do Everyone a favor and leave.”<sup>242</sup>

231. Chaslot explained why TikTok feeds users this content:

[T]he algorithm is able to find the piece of content that you’re vulnerable to. That will make you click, that will make you watch, but it doesn’t mean you really like it. And that’s the content that you enjoy the most. It’s just the content that’s most likely to make you stay on the platform.<sup>243</sup>

232. An additional investigation by *The Wall Street Journal* using bots found “that through its powerful algorithms, TikTok can quickly drive minors—among the biggest users of the app—into endless spools of content about sex and drugs.”<sup>244</sup>

233. The bots in this investigation were registered as users aged 13 to 15 and, as before, programmed to demonstrate interest by how long they watched the videos TikTok’s algorithms served them.<sup>245</sup> The bots scrolled through videos that did not match their interests without pausing.<sup>246</sup> The bots lingered on videos that matched any of their programmed interests.<sup>247</sup>

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<sup>241</sup> *Id.*

<sup>242</sup> *Id.*

<sup>243</sup> *Id.*

<sup>244</sup> Rob Barry et al., *How TikTok Serves up Sex and Drug Videos to Minors*, Wall St. J. (Sept. 8, 2021), available at [https://www.wsj.com/articles/tiktok-algorithm-sex-drugs-minors-11631052944?st=e92pu5734lvc7ta&reflink=desktopwebshare\\_permalink](https://www.wsj.com/articles/tiktok-algorithm-sex-drugs-minors-11631052944?st=e92pu5734lvc7ta&reflink=desktopwebshare_permalink).

<sup>245</sup> *Id.*

<sup>246</sup> *Id.*

<sup>247</sup> *Id.*

234. Every second the bot hesitated or re-watched a video again proved key to what TikTok recommended to the accounts, which *The Wall Street Journal* found was used to “drive users of any age deep into rabbit holes of content[.]”<sup>248</sup>

235. For example, one bot was programmed to pause on videos referencing drugs, among other topics. The first day on the platform, the “account lingered on a video of a young woman walking through the woods with a caption” referencing “stoner girls.”<sup>249</sup> The following day the bot viewed a video of a “marijuana-themed cake.”<sup>250</sup> The “majority of the next thousand videos” TikTok directed at the teenage account “tout[ed] drugs and drug use, including marijuana, psychedelics and prescription medication.”<sup>251</sup>

236. TikTok similarly zeroed in on and narrowed the videos it showed accounts whether the bot was programmed to express interest in drugs, sexual imagery, or a multitude of interests. In the first couple of days, TikTok showed the bots a “high proportion of popular videos.”<sup>252</sup> “But after three days, TikTok began serving a high number of obscure videos.”<sup>253</sup>

237. For example, a bot registered as a 13-year-old was shown a series of popular videos upon signing up.<sup>254</sup> The bot, which was programmed to demonstrate interest in sexual text and

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<sup>248</sup> *Id.*

<sup>249</sup> *Id.*

<sup>250</sup> *Id.*

<sup>251</sup> *Id.*

<sup>252</sup> *Id.*

<sup>253</sup> *Id.*

<sup>254</sup> *Id.*

imagery, also watched sexualized videos. Later, “[i]t experienced one of the most extreme rabbit holes among *The Wall Street Journal*’s accounts. Many videos described how to tie knots for sex, recover from violent sex acts and discussed fantasies about rape.”<sup>255</sup> At one point, “more than 90 percent of [one] account’s video feed was about bondage and sex.”<sup>256</sup>

238. At least 2,800 of the sexualized videos that were shown to *The Wall Street Journal*’s bots were labeled as being for adults only.<sup>257</sup> Yet, TikTok directed these videos to the minor accounts because, as TikTok told *The Wall Street Journal*, it does not “differentiate between videos it serves to adults and minors.”<sup>258</sup>

239. TikTok also directed a concentrated stream of videos at accounts programmed to express interest in a variety of topics. One such account was programmed to linger over hundreds of Japanese film and television cartoons. “In one streak of 150 videos, all but four” of the videos TikTok directed at the account, “featured Japanese animation—many with sexual themes.”<sup>259</sup>

240. The relentless stream of content intended to keep users engaged “can be especially problematic for young people,” because they may lack the capability to stop watching, says David Anderson, a clinical psychologist at the nonprofit mental health care provider, The Child Mind Institute.<sup>260</sup>

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<sup>255</sup> *Id.*

<sup>256</sup> *Id.*

<sup>257</sup> *Id.*

<sup>258</sup> *Id.*

<sup>259</sup> *Id.*

<sup>260</sup> *Id.*

241. In a similar investigation, *The Wall Street Journal* found TikTok “flood[ed] teen users with videos of rapid-weight-loss competitions and ways to purge food that health professionals say contribute to a wave of eating-disorder cases spreading across the country.”<sup>261</sup>

242. In this investigation, *The Wall Street Journal* analyzed the tens of thousands of videos TikTok recommended to a dozen bots registered as 13-year-olds. As before, the bots were given interests. Bots scrolled quickly through videos that did not match their interests and lingered on videos that did.<sup>262</sup> The accounts registered as 13-year-olds were programmed at different times to display interests in weight loss, gambling, and alcohol.<sup>263</sup>

243. “TikTok’s algorithm quickly gave users the content they’ll watch, for as long as they’ll watch it.”<sup>264</sup> For example, TikTok streamed gambling videos to a bot registered to a 13-year-old after it first searched for and favorited several such videos.<sup>265</sup> When the bot began demonstrating interest in weight loss videos, the algorithm adapted quickly.<sup>266</sup>

244. After the change in programming, weight-loss videos accounted for well over 40 percent of the content TikTok’s algorithm recommended to the user.<sup>267</sup>

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<sup>261</sup> Tawnell D. Hobbs *et al.*, *The Corpse Bride Diet: How TikTok Inundates Teens with Eating-Disorder Videos*, Wall St. J. (Dec. 17, 2021), available at <https://www.wsj.com/articles/how-tiktok-inundates-teens-with-eating-disorder-videos-11639754848> (some of the accounts performed searches or sent other, undisclosed signals indicating their preferences).

<sup>262</sup> *Id.*

<sup>263</sup> *Id.*

<sup>264</sup> *Id.*

<sup>265</sup> *Id.*

<sup>266</sup> *Id.*

<sup>267</sup> *Id.*

245. The other accounts were also flooded with weight-loss videos. Over the course of about 45 days, TikTok inundated the accounts with more than 32,000 such videos, “many promoting fasting, offering tips for quickly burning belly fat and pushing weight-loss detox programs and participation in extreme weight-loss competitions.”<sup>268</sup> Some encouraged purging, eating less than 300 calories a day, consuming nothing but water some days, and other hazardous diets.<sup>269</sup>

246. According to Alyssa Moukheiber, a treatment center dietitian, TikTok’s powerful algorithm and the harmful streams of content it directs at young users can tip them into unhealthy behaviors or trigger a relapse.<sup>270</sup>

247. Sadly, the TikTok algorithm had its intended effect for the several teenage girls interviewed by *The Wall Street Journal* (and upon information and belief, many others), who reported developing eating disorders or relapsing after being influenced by the extreme diet videos TikTok promoted to them.<sup>271</sup>

248. Katie Bell, a co-founder of the Healthy Teen Project, “said the majority of her 17 teenage residential patients told her TikTok played a role in their eating disorders.”<sup>272</sup>

249. Others, like Stephanie Zerwas, an associate professor of psychiatry at the University of North Carolina at Chapel Hill, could not recount how many of her young patients

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<sup>268</sup> *Id.*

<sup>269</sup> *Id.*

<sup>270</sup> *Id.*

<sup>271</sup> *Id.*

<sup>272</sup> *Id.*

told her that “I’ve started falling down this rabbit hole, or I got really into this or that influencer on TikTok, and then it started to feel like eating-disorder behavior was normal, that everybody was doing that.”<sup>273</sup>

250. This trend extends nationwide. The National Association of Anorexia Nervosa and Associated Disorders has fielded 50 percent more calls to its hotline since the pandemic began, most of whom it says are from young people or parents on their behalf.<sup>274</sup>

251. Despite the ample evidence that TikTok’s design and operation of its platform harms the tens of millions of minors who use it, TikTok continues to manipulate them into returning to the platform again and again so that it may serve them ads in between the exploitive content it amplifies.

*d. YouTube Intentionally Marketed to and Designed its Social Media Platform for Minor Users, Substantially Contributing to the Mental Health Crisis.*

(1) *The YouTube Platform*

252. YouTube is a platform where users can post, share, view, and comment on videos related to a vast range of topics. The platform became available publicly in December 2005 and was acquired by Google in 2006.

253. YouTube reports that today it has over 2 billion monthly logged-in users.<sup>275</sup> Even more people use YouTube each month because consumers do not have to register an account to view a video on YouTube. As a result, anyone can view most content on YouTube—regardless of age.

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<sup>273</sup> *Id.*

<sup>274</sup> *Id.*

<sup>275</sup> *YouTube for Press*, YouTube, <https://blog.youtube/press/> (last visited Dec. 8, 2022).

254. Users, whether logged in or not, watch billions of hours of videos every day.<sup>276</sup>

255. Users with accounts can post their own videos, comment on others, and since 2010 express their approval of videos through “likes.”<sup>277</sup>

256. Beginning in 2008 and through today, YouTube has recommended videos to users.<sup>278</sup> Early on, the videos YouTube recommended to users were the most popular videos across the platform.<sup>279</sup> YouTube admits “[n]ot a lot of people watched those videos[,]” at least not based on its recommendation.<sup>280</sup>

257. Since then, YouTube has designed and refined its recommendation system using machine learning algorithms that today take into account a user’s “likes,” time spent watching a video, and other behaviors to tailor its recommendations to each user.<sup>281</sup>

258. YouTube automatically plays those recommendations for a user after they finish watching a video. This feature, known as “autoplay,” was implemented in 2015. YouTube turns the feature on by default, which means videos automatically and continuously play for users unless they turn it off.<sup>282</sup>

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<sup>276</sup> *Id.*

<sup>277</sup> Josh Lowensohn, *YouTube’s big redesign goes live to everyone*, CNET (Mar. 31, 2010), available at <https://www.cnet.com/culture/youtubes-big-redesign-goes-live-to-everyone/>.

<sup>278</sup> Cristos Goodrow, *On YouTube’s recommendation system*, YouTube (Sept. 15, 2021), available at <https://blog.youtube/inside-youtube/on-youtubes-recommendation-system/>.

<sup>279</sup> *Id.*

<sup>280</sup> *Id.*

<sup>281</sup> *Id.*

<sup>282</sup> *Autoplay videos*, YouTube Help,



259. YouTube purports to disable by default its autoplay feature for users aged 13-17.<sup>283</sup> But, as mentioned above, YouTube does not require users to log in or even have an account to watch videos. For them or anyone who does not self-report an age between 13 and 17, YouTube defaults to automatically playing the videos its algorithm recommends to the user.

(2) *YouTube Markets its Platform to Minors*

260. The primary way YouTube profits is through advertising. YouTube made \$19 billion in ad revenue in 2021 alone.<sup>284</sup>

261. “In 2012, YouTube concluded that the more people watched, the more ads it could run[.]”<sup>285</sup> “So YouTube . . . set a company-wide objective to reach one billion hours of viewing a day[.]”<sup>286</sup>

262. “[T]he best way to keep eyes on the site,” YouTube realized, was “recommending videos, alongside a clip or after one was finished.”<sup>287</sup> That is what led to the development of its recommendation algorithm and autoplay feature.

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<https://support.google.com/youtube/answer/6327615?hl=en#:~:text=For%20users%20aged%2013%2D17,turned%20off%20Autoplay%20for%20you> (last visited Dec. 8, 2022).

<sup>283</sup> *Id.*

<sup>284</sup> Alphabet Inc., Annual Report, Form 10-k at 60 (2021), *available at* <https://www.sec.gov/ix?doc=/Archives/edgar/data/1652044/000165204422000019/goog-20211231.htm>.

<sup>285</sup> Mark Bergen, *YouTube Executive Ignores Warnings, Letting Toxic Videos Run Rampant*, Bloomberg (Apr. 2, 2019), *available at* <https://www.bloomberg.com/news/features/2019-04-02/youtube-executives-ignored-warnings-letting-toxic-videos-run-rampant?leadSource=uverify%20wall>.

<sup>286</sup> *Id.*

<sup>287</sup> *Id.*

263. YouTube has long known minors use its platforms in greater proportion than older demographics.

264. Still, YouTube has not implemented even rudimentary protocols to verify the age of users. Anyone can watch a video on YouTube without registering an account or reporting their age.

265. Instead, YouTube leveraged its popularity among youth to increase its revenue from advertisements by marketing its platform to popular brands of children's products. For example, Google pitched Mattel, the maker of Barbie and other popular kids' toys, by telling its executives that "YouTube is today's leader in reaching children age 6-11 against top TV channels."<sup>288</sup> When presenting to Hasbro, the maker of Play-Doh, My Little Pony, and other kids' toys, Google boasted that "YouTube was unanimously voted as the favorite website for kids 2-12," and that "93% of tweens visit YouTube to watch videos."<sup>289</sup> In a different presentation to Hasbro, YouTube was referenced as "[t]he new 'Saturday Morning Cartoons,'" and claimed that YouTube was the "#1 website regularly visited by kids" and "the #1 source where children discover new toys + games."<sup>290</sup>

266. In addition to turning a blind eye towards underage users of its platform, YouTube developed and marketed a version of YouTube specifically for children under the age of 13.

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<sup>288</sup> Complaint for Permanent Injunction, Civil Penalties, and Other Equitable Relief, Exhibit A, *FTC v. Google LLC et al.*, No. 1-19-cv-02642-BAH (D.D.C. Sept. 4, 2019), Dkt. # 1-1.

<sup>289</sup> *Id.*

<sup>290</sup> *Id.*

267. YouTube’s efforts to attract young users have been successful. A vast majority, 95 percent, of children ages 13–17 have used YouTube.<sup>291</sup>

(3) *YouTube Intentionally Maximizes the Time Users Spend on its Platform*

268. Google designed YouTube to maximize user engagement, predominantly through the amount of time users spend watching videos on the platform. To that end, Google employs design elements and complex algorithms to create a never-ending stream of videos intended to grip user’s attention.

269. Like the other Defendants’ social media platforms, Google developed features that exploit psychological phenomenon such as IVR to maximize the time users spend on YouTube.

270. YouTube uses design elements that operate on principles of IVR to drive both YouTube content creators and YouTube viewers into habitual, excessive use. Google designed YouTube to allow users to “like,” comment, and share videos and to subscribe to content creator’s channels. These features serve as rewards for users who create and upload videos to YouTube. As described above, receiving a “like” indicates others’ approval and activates the reward region of the brain.<sup>292</sup> The use of “likes,” therefore, encourages users to use YouTube over and over, seeking future pleasurable experiences.

271. YouTube also uses IVR to encourage users to view others content. One of the ways Google employs IVR into YouTube’s design is through subscriber push notifications and emails, which are designed to prompt users to watch YouTube content and encourages excessive use of

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<sup>291</sup> *Id.*

<sup>292</sup> See, e.g., Lauren E. Sherman et al., *The Power of the Like in Adolescence: Effects of Peer Influence on Neural and Behavioral Responses to Social Media*, 27(7) Psych. Sci. 1027–35 (July 2016), available at <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5387999/>.

the platform. When a user “subscribes” to another user’s channel, they receive notifications every time that user uploads new content, prompting them to open YouTube and watch the video.<sup>293</sup>

272. One of YouTube’s defining features is its panel of recommended videos. YouTube recommends videos to users on both the YouTube home page and on every individual video page in an “Up Next” panel.<sup>294</sup> This list automatically populates next to the video a user is currently watching. This recommended video list is a never-ending feed of videos intended to keep users on the app watching videos without having to affirmatively click or search for other videos. This constant video stream, comprised of videos recommended by YouTube’s algorithms, is the primary way Google increases the time users spend on YouTube.

#### *(4) YouTube’s Algorithms are Harmful and Manipulative*

273. Google uses algorithms throughout YouTube to recommend videos to users. These algorithms select videos that populate the YouTube homepage, rank results in user searches, and suggest videos for viewers to watch next. These algorithms are manipulative by design and increase the amount of time users spend on YouTube.

274. Google began building the YouTube recommendation system in 2008.<sup>295</sup> When Google initially developed its recommendation algorithms, the end goal was to maximize the amount of time users spend watching YouTube videos. A YouTube spokesperson admitted as

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<sup>293</sup> Manage YouTube Notifications, YouTube, <https://support.google.com/youtube/answer/3382248?hl=en&co=GENIE.Platform%3DDesktop> (last visited Dec. 8, 2022).

<sup>294</sup> Recommended Videos, YouTube, <https://www.youtube.com/howyoutubeworks/product-features/recommendations/> (last visited Dec. 8, 2022).

<sup>295</sup> Cristos Goodrow, *On YouTube’s recommendation system*, YouTube (Sept. 15, 2021), available at <https://blog.youtube/inside-youtube/on-youtubes-recommendation-system/>.

much, saying YouTube’s recommendation system was initially set up to “optimize” the amount of time users watch videos.<sup>296</sup>

275. Chaslot, the former YouTube engineer, has also stated that when he worked for YouTube designing its recommendation algorithm, the priority was to keep viewers on the site for as long as possible to maximize “watch time.”<sup>297</sup> Chaslot further stated that “[i]ncreasing users’ watch time is good for YouTube’s business model” because the more people watch videos, the more ads they see and YouTube’s advertising revenue increases.<sup>298</sup>

276. Early on, one of the primary metrics behind YouTube’s recommendation algorithm was clicks. As YouTube describes, “[c]licking on a video provides a strong indication that you will also find it satisfying.”<sup>299</sup> But as YouTube learned, clicking on a video does not mean a user actually watched it. Thus, in 2012, YouTube also started tracking watch time—the amount of time a user spends watching a video.<sup>300</sup> YouTube made this switch to keep people watching for as long as possible.<sup>301</sup> In YouTube’s own words, this switch was successful. “These changes have so far

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<sup>296</sup> Ben Popken, *As algorithms take over, YouTube’s recommendations highlight a human problem*, NBC (Apr. 19, 2018), available at <https://www.nbcnews.com/tech/social-media/algorithms-take-over-youtube-s-recommendations-highlight-human-problem-n867596>.

<sup>297</sup> William Turton, *How YouTube’s algorithm prioritizes conspiracy theories*, Vice (Mar. 5, 2018), available at <https://www.vice.com/en/article/d3w9ja/how-youtubes-algorithm-prioritizes-conspiracy-theories>.

<sup>298</sup> Jesselyn Cook & Sebastian Murdock, *YouTube is a Pedophile’s Paradise*, Huffington Post (Mar. 20, 2020), available at [https://www.huffpost.com/entry/youtube-pedophile-paradise\\_n\\_5e5d79d1c5b6732f50e6b4db](https://www.huffpost.com/entry/youtube-pedophile-paradise_n_5e5d79d1c5b6732f50e6b4db).

<sup>299</sup> Cristos Goodrow, *On YouTube’s Recommendation System*, YouTube (Sept. 15, 2021), available at <https://blog.youtube/inside-youtube/on-youtubes-recommendation-system/>.

<sup>300</sup> *Id.*

proved very positive -- primarily less clicking, more watching. We saw the amount of time viewers spend watching videos across the site increase immediately[.]”<sup>302</sup> And in 2016, YouTube started measuring “valued watchtime” via user surveys to ensure that viewers are satisfied with their time spent watching videos on YouTube.<sup>303</sup> All of these changes to YouTube’s algorithms were made to ensure that users spend more time watching videos and ads.

277. YouTube’s current recommendation algorithm is based on deep-learning neural networks that retune its recommendations based on the data fed into it.<sup>304</sup> While this algorithm is incredibly complex, its process can be broken down into two general steps. First, the algorithm compiles a shortlist of several hundred videos by finding videos that match the topic and other features of the video a user is currently watching.<sup>305</sup> Then the algorithm ranks the list according to the user’s preferences, which the algorithm learns by tracking a user’s clicks, “likes,” and other

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<sup>301</sup> Dave Davies, *How YouTube became one of the planet’s most influential media businesses*, NPR (Sept. 8, 2022), available at <https://www.npr.org/2022/09/08/1121703368/how-youtube-became-one-of-the-planets-most-influential-media-businesses>.

<sup>302</sup> Eric Meyerson, *YouTube Now: Why We Focus on Watch Time*, YouTube (Aug. 10, 2012), available at <https://blog.youtube/news-and-events/youtube-now-why-we-focus-on-watch-time/>.

<sup>303</sup> Cristos Goodrow, *On YouTube’s recommendation system*, YouTube (Sept. 15, 2021), available at <https://blog.youtube/inside-youtube/on-youtubes-recommendation-system/>.

<sup>304</sup> Alexis C. Madrigal, *How YouTube’s Algorithm Really Works*, Atl. (Nov. 8, 2018), <https://www.theatlantic.com/technology/archive/2018/11/how-youtubes-algorithm-really-works/575212/>; Paul Covington *et al.*, *Deep Neural Networks for YouTube Recommendations*, Google (2016), available at <https://storage.googleapis.com/pub-tools-public-publication-data/pdf/45530.pdf>.

<sup>305</sup> Karen Hao, *YouTube is experimenting with ways to make its algorithm even more addictive*, MIT Tech. Rev. (Sept. 27, 2019), available at <https://www.technologyreview.com/2019/09/27/132829/youtube-algorithm-gets-more-addictive/>; Paul Covington *et al.*, *Deep Neural Networks for YouTube Recommendations*, Google (2016), available at <https://storage.googleapis.com/pub-tools-public-publication-data/pdf/45530.pdf>.

interactions.<sup>306</sup> In short, the algorithms track and measure a user's previous viewing habits and then finds and recommends other videos the algorithm thinks will hold the consumer's attention.

278. YouTube's recommendation system "is constantly evolving, learning every day from over 80 billion pieces of information."<sup>307</sup> Some of the information the recommendation algorithm relies on to deliver recommended videos to users includes users' watch and search history, channel subscriptions, clicks, watch time, survey responses, shares, "likes," dislikes, users' location (country) and the time of day.<sup>308</sup>

279. The recommendation algorithm can determine what "signals" or factors are more important to individual users.<sup>309</sup> For example, if a user shares every video they watch, including videos the user gives a low rating, the algorithm learns not to heavily factor the user's shares when recommending content.<sup>310</sup> Thus, the recommendation algorithm "develops dynamically" to individual user's viewing habits and makes highly specific recommendations to keep individual users watching videos.<sup>311</sup>

280. In addition to the algorithm's self-learning, Google engineers consistently update YouTube's recommendation and ranking algorithms, making several updates every month,

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<sup>306</sup> *Id.*

<sup>307</sup> Cristos Goodrow, *On YouTube's Recommendation System*, YouTube (Sept. 15, 2021), available at <https://blog.youtube/inside-youtube/on-youtubes-recommendation-system/>.

<sup>308</sup> Recommended Videos, YouTube, <https://www.youtube.com/howyoutubeworks/product-features/recommendations/#signals-used-to-recommend-content> (last visited Dec. 8, 2022).

<sup>309</sup> *Id.*

<sup>310</sup> *Id.*

<sup>311</sup> *Id.*

according to YouTube Chief Product Officer Neal Mohan (“Mohan”).<sup>312</sup> The end goal is to increase the amount of time users spend watching content on YouTube.

281. Because Google has designed and refined its algorithms to be manipulative, these algorithms are incredibly successful at getting users to view content based on the algorithm’s recommendation. Mohan stated in 2018 that YouTube’s AI-driven recommendations are responsible for 70 percent of the time users spend on YouTube.<sup>313</sup> In other words, 70 percent of all YouTube content that users watch was recommended to users by YouTube’s algorithms as opposed to users purposely searching for and identifying the content they watch.

282. Mohan also stated that recommendations keep mobile device users watching YouTube for more than 60 minutes at a time on average.<sup>314</sup>

283. Given that people watch more than one billion hours of YouTube videos daily,<sup>315</sup> YouTube’s recommendation algorithms are responsible for hundreds of millions of hours that users spend watching videos on YouTube.

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<sup>312</sup> Nilay Patel, *YouTube Chief Product Officer Neal Mohan on The Algorithm, Monetization, and the Future for Creators*, Verge (Aug. 3, 2021), available at <https://www.theverge.com/22606296/youtube-shorts-fund-neal-mohan-decoder-interview>.

<sup>313</sup> Joan E. Solsman, *YouTube’s AI is the puppet master over most of what you watch*, CNET (Jan. 20, 2018), available at <https://www.cnet.com/tech/services-and-software/youtube-ces-2018-neal-mohan/>.

<sup>314</sup> *Id.*

<sup>315</sup> Shira Ovide, *The YouTube Rabbit Hole is Nuanced*, N.Y. Times (Apr. 21, 2022), available at <https://www.nytimes.com/2022/04/21/technology/youtube-rabbit-hole.html>.



*(5) YouTube's Conduct in Designing and Operating its Platform  
has Harmed the Mental Health of Minors*

284. By designing YouTube's algorithms to prioritize and maximize the amount of time users spend watching videos, Google has harmed the mental health of minors. In particular, YouTube has harmed the mental health of minors by recommending content to youth through its algorithms.

285. YouTube's algorithms push its young users down rabbit holes where they are likely to encounter content that is violent, sexual, or encourages self-harm, encourages eating disorders, among other types of harmful content.

286. Research by the Tech Transparency Project ("TTP") shows that YouTube Kids fed children content that involved drug culture, guns, and beauty and diet tips that could lead to harmful body image issues.<sup>316</sup> Among the videos TTP found were step-by-step instructions on how to conceal a gun, guides on how to bleach one's face at home, and workout videos emphasizing the importance of burning calories and telling kids to "[w]iggle your jiggle."<sup>317</sup> This research shows that YouTube Kids not only lets inappropriate content slip through its algorithmic filters but actively directed the content to kids through its recommendation engine.

287. Amanda Kloer, a campaign director with the child safety group ParentsTogether, spent an hour on her child's YouTube Kids profile and found videos "encouraging kids how to

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<sup>316</sup> Alex Hern, *YouTube Kids shows videos promoting drug culture and firearms to toddlers*, Guardian (May 5, 2022), available at <https://www.theguardian.com/technology/2022/may/05/youtube-kids-shows-videos-promoting-drug-culture-firearms-toddlers>.

<sup>317</sup> *Guns, Drugs, and Skin Bleaching: YouTube Kids Poses Risks to Children*, Tech Transparency Project (May 5, 2022), available at <https://www.techtransparencyproject.org/articles/guns-drugs-and-skin-bleaching-youtube-kids-still-poses-risks-children>.

make their shirts sexier, a video in which a little boy pranks a girl over her weight, and a video in which an animated dog pulls objects out of an unconscious animated hippo's butt.”<sup>318</sup> Another parent recounted that YouTube Kids' autoplay function led her 6-year-old daughter to an animated video that encouraged suicide.<sup>319</sup>

288. Other youth are fed content by YouTube's algorithms that encourages self-harm. As reported by PBS Newshour, a middle-schooler named Olivia compulsively watched YouTube videos every day after she came home from school.<sup>320</sup> Over time she became depressed and started searching for videos on how to commit suicide. Similar videos then gave her the idea of overdosing. Weeks later she was in the hospital after “downing a bottle of Tylenol.”<sup>321</sup> Ultimately, she was admitted into rehab for digital addiction because of her compulsive YouTube watching.<sup>322</sup>

289. According to the Pew Research Center, 46 percent of parents say their child has encountered inappropriate videos on YouTube.<sup>323</sup> And children are not encountering these videos on their own volition. Rather, they are being fed harmful and inappropriate videos through

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<sup>318</sup> Rebecca Heilweil, *YouTube's kids app has a rabbit hole problem*, Vox (May 12, 2021), available at <https://www.vox.com/recode/22412232/youtube-kids-autoplay>.

<sup>319</sup> *Id.*

<sup>320</sup> Lesley McClurg, *After compulsively watching YouTube, teenage girl lands in rehab for 'digital addiction'*, PBS (May 16, 2017), available at <https://www.pbs.org/newshour/health/compulsively-watching-youtube-teenage-girl-lands-rehab-digital-addiction>.

<sup>321</sup> *Id.*

<sup>322</sup> *Id.*

<sup>323</sup> Brooke Auxier *et al.*, *Parenting Children in The Age of Screens*, Pew Rsch. Ctr. (July 28, 2020), available at <https://www.pewresearch.org/internet/2020/07/28/parental-views-about-youtube/>.

YouTube's algorithms. Again, YouTube's AI-driven recommendations are responsible for 70 percent of the time users spend on YouTube.<sup>324</sup>

290. Other reports have also found that YouTube's recommendation algorithm suggests a wide array of harmful content, including videos that feature misinformation, violence, and hate speech, along with other content that violates YouTube's policies.<sup>325</sup> A 2021 crowdsourced investigation from the Mozilla Foundation involving 37,000 YouTube users revealed that 71 percent of all reported negative user experiences came from videos recommended by YouTube to users.<sup>326</sup> And users were 40 percent more likely to report a negative experience with a video recommended by YouTube's algorithm than with a video they searched for.<sup>327</sup>

291. The inappropriate and disturbing content YouTube's algorithms expose children to have adverse effects on mental health. Mental health experts have warned that YouTube is a growing source of anxiety and inappropriate sexual behavior among kids under the age of 13.<sup>328</sup>

292. Further, the harmful content YouTube's algorithms expose children to harm brain development. "Children who repeatedly experience stressful and/or fearful emotions may under

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<sup>324</sup> Joan E. Solsman, *YouTube's AI is the puppet master over most of what you watch*, CNET (Jan. 20, 2018), available at <https://www.cnet.com/tech/services-and-software/youtube-ces-2018-neal-mohan/>.

<sup>325</sup> Brandy Zadrozny, *YouTube's recommendations still push harmful videos, crowdsourced study finds*, NBC News (July 17, 2021), available at <https://www.nbcnews.com/tech/tech-news/youtubes-recommendations-still-push-harmful-videos-crowdsourced-study-rcna1355>.

<sup>326</sup> *Id.*

<sup>327</sup> *Id.*

<sup>328</sup> Josephine Bila, *YouTube's dark side could be affecting your child's mental health*, CNBC (Feb. 13, 2018), available at <https://www.cnbc.com/2018/02/13/youtube-is-causing-stress-and-sexualization-in-young-children.html>.

develop parts of their brain’s prefrontal cortex and frontal lobe, the parts of the brain responsible for executive functions, like making conscious choices and planning ahead,” according to Donna Volpitta, Ed.D., founder of the Center for Resilient Leadership (“Volpitta”).<sup>329</sup>

293. Even though much of the content YouTube’s algorithms feed to youth is harmful, it triggers chemical reactions that encourage youth to spend more time watching videos on YouTube. According to Volpitta, watching “fear-inducing videos cause the brain to receive a small amount of dopamine,” which acts as a reward and creates a desire to do something over and over.<sup>330</sup> This dopaminergic response is in addition to the reward stimulus YouTube provides users through IVR.

294. Mental health professionals across the country have seen an increase in children experiencing mental health issues because of YouTube. Natasha Daniels, a child psychotherapist in Arizona, has said she has seen a rise in cases of children suffering from anxiety because of videos they watched on YouTube.<sup>331</sup> Because of their anxiety, these children “exhibit loss of appetite, sleeplessness, crying fits, and fear.”<sup>332</sup>

295. In addition to causing anxiety, watching YouTube is also associated with insufficient sleep.<sup>333</sup> In one study on the effect of app use and sleep, YouTube was the only app

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<sup>329</sup> *Id.*

<sup>330</sup> *Id.*

<sup>331</sup> *Id.*

<sup>332</sup> *Id.*

<sup>333</sup> Meg Pillion et al., *What’s ‘app’-ning to adolescent sleep? Links between device, app use, and sleep outcomes*, 100 *Sleep Med.* 174–82 (Dec. 2022), available at <https://www.sciencedirect.com/science/article/abs/pii/S1389945722010991?via%3Dihub>.

consistently associated with negative sleep outcomes.<sup>334</sup> For every 15 minutes teens spent watching YouTube, they had a 24 percent greater chance of getting fewer than seven hours of sleep.<sup>335</sup> YouTube is particularly problematic on this front because of YouTube’s recommendation and autoplay feature make it “so easy to finish one video” and watch the next, said Dr. Alon Avidan, director of the UCLA Sleep Disorders Center.<sup>336</sup> In turn, insufficient sleep is associated with poor health outcomes.<sup>337</sup> Thus, YouTube exacerbates an array of youth mental health issues by contributing to sleep deprivation.

296. Despite the vast evidence that YouTube’s design and algorithms harms millions of youths, Google continues to manipulate them into staying on the platform and watching more and more videos so that it can increase its ad revenue.

#### **E. The Effect of Social Media Use on Schools**

298. Schools are uniquely harmed by the current youth mental health crisis.

299. This is because schools are one of the main providers for mental health services for school-aged children.<sup>338</sup> Indeed, over 3.1 million children ages 12-17 received mental health

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<sup>334</sup> *Id.*

<sup>335</sup> *Id.*

<sup>336</sup> Cara Murez, *One App is Especially Bad for Teens’ Sleep*, U.S. News (Sept. 13, 2022), available at <https://www.usnews.com/news/health-news/articles/2022-09-13/one-app-is-especially-bad-for-teens-sleep>.

<sup>337</sup> Jessica C. Levenson et al., *The Association Between Social Media Use and Sleep Disturbance Among Young Adults*, 85 Preventive Med. 36–41 (Apr. 2016), available at <https://www.sciencedirect.com/science/article/abs/pii/S0091743516000025>.

<sup>338</sup> *National Survey on Drug Use and Health*, SAMHSA (2019 & 1st & 4th Qs. 2020), available at <https://www.samhsa.gov/data/report/2020-nsduh-detailed-tables>.

services through an education setting in 2020, more than any other non-specialty mental health service setting.<sup>339</sup>

300. Most schools offer mental health services to students. In the 2021-22 school year, 96 percent of public schools reported offering at least one type of mental health service to their students.<sup>340</sup> But 88 percent of public schools did not strongly agree that they could effectively provide mental health services to all students in need.<sup>341</sup> The most common barriers to providing effective mental health services are (1) insufficient number of mental health professionals; (2) inadequate access to licensed mental health professionals; and (3) inadequate funding.<sup>342</sup> Student opinions also reflect that schools are unable to provide adequate mental health services. Less than a quarter of students in grades 6–12 report accessing counseling or psychological services when they are upset, stressed, or having a problem.<sup>343</sup> And of the students who access mental health services, only 41 percent of middle schoolers and 36 percent of high schoolers are satisfied with the services they receive.<sup>344</sup>

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<sup>339</sup> *Id.*

<sup>340</sup> *Roughly Half of Public Schools Report That They Can Effectively Provide Mental Health Services to All Students In Need*, Nat'l Ctr. Educ. Stat. (May 31, 2022), available at [https://nces.ed.gov/whatsnew/press\\_releases/05\\_31\\_2022\\_2.asp](https://nces.ed.gov/whatsnew/press_releases/05_31_2022_2.asp).

<sup>341</sup> *Id.*

<sup>342</sup> *Id.*

<sup>343</sup> *Insights From the Student Experience, Part I: Emotional and Mental Health* at 2, YouthTruth (2022), available at [https://youthtruthsurvey.org/wpcontent/uploads/2022/10/YouthTruth\\_EMH\\_102622.pdf](https://youthtruthsurvey.org/wpcontent/uploads/2022/10/YouthTruth_EMH_102622.pdf).

<sup>344</sup> *Id.*

301. In part, schools are struggling to provide adequate mental health services because of the increase in students seeking these services. More than two-thirds of public schools reported an increase in the percent of students seeking mental health services from school since the start of the pandemic.<sup>345</sup>

302. During this same period, adolescents increased their social media use, also raising levels of excessive and problematic use of digital media.<sup>346</sup> And these higher rates of social media use are related to higher “ill-being.”<sup>347</sup> Thus, the increase in adolescent social media use during the pandemic has caused an increase in adolescents experiencing mental health problems.

303. That relationship is reflected in reports from public schools. Over 75 percent of public schools reported an increase in staff expressing concerns about student depression, anxiety, and other disturbances since the start of the pandemic.<sup>348</sup> Students receiving mental health services in educational settings predominately do so because they “[f]elt depressed,” “[t]hought about killing [themselves] or tried to” or “[f]elt very afraid and tense.”<sup>349</sup>

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<sup>345</sup> *Roughly Half of Public Schools Report That They Can Effectively Provide Mental Health Services to All Students In Need*, Nat’l Ctr. Educ. Stat. (May 31, 2022), available at [https://nces.ed.gov/whatsnew/press\\_releases/05\\_31\\_2022\\_2.asp](https://nces.ed.gov/whatsnew/press_releases/05_31_2022_2.asp).

<sup>346</sup> Laura Marciano et al., *Digital Media Use and Adolescents' Mental Health During the Covid-19 Pandemic: A Systematic Review and Meta-Analysis*, Frontiers Pub. Health (Feb. 2022), available at <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8848548/>.

<sup>347</sup> *Id.*

<sup>348</sup> *Roughly Half of Public Schools Report That They Can Effectively Provide Mental Health Services to All Students In Need*, Nat’l Ctr. Educ. Stat. (May 31, 2022), available at [https://nces.ed.gov/whatsnew/press\\_releases/05\\_31\\_2022\\_2.asp](https://nces.ed.gov/whatsnew/press_releases/05_31_2022_2.asp).

<sup>349</sup> Rachel N. Lipari et al., *Adolescent Mental Health Service Use and Reasons for Using Services in Specialty, Educational, and General Medical Settings*, SAMHSA (May 5, 2016), available at

304. Anxiety disorders are also up, affecting 31.9 percent of adolescents between 13 and 18 years old.<sup>350</sup> “Research shows that untreated teenagers with anxiety disorders are at higher risk to perform poorly in school, miss out on important social experiences, and engage in substance abuse.”<sup>351</sup>

305. Schools are struggling not only to provide students with mental health services but also to deliver an adequate education because of the youth mental health crisis. Students in grades 6-12 identify depression, stress, and anxiety as the most prevalent obstacles to learning.<sup>352</sup> Most middle school and high school students also fail to get enough sleep on school nights, which contributes to poor academic performance.<sup>353</sup> These negative mental health outcomes are also the most common symptoms of excessive social media use.

306. The youth mental health crisis has also caused a wide range of other behavioral issues among students that interfere with schools’ ability to teach. In 2022, 61 percent of public schools saw an increase in classroom disruptions from student misconduct compared to school

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[https://www.samhsa.gov/data/sites/default/files/report\\_1973/ShortReport-1973.html#:~:text=The percent20Substance percent20Abuse percent20and percent20Mental,273 percent20DTALK percent20\(8255\).](https://www.samhsa.gov/data/sites/default/files/report_1973/ShortReport-1973.html#:~:text=The percent20Substance percent20Abuse percent20and percent20Mental,273 percent20DTALK percent20(8255).)

<sup>350</sup> *Anxiety Disorders: Facts and Statistics*, Anxiety & Depression Ass’n Am., <https://adaa.org/understanding-anxiety/facts-statistics> (last visited Dec. 8, 2022).

<sup>351</sup> *Id.*

<sup>352</sup> *Insights From the Student Experience, Part I: Emotional and Mental Health at 2–3*, YouthTruth (2022), available at [https://youthtruthsurvey.org/wp-content/uploads/2022/10/YouthTruth\\_EMH\\_102622.pdf](https://youthtruthsurvey.org/wp-content/uploads/2022/10/YouthTruth_EMH_102622.pdf).

<sup>353</sup> Anne G. Wheaton *et al.*, *Short Sleep Duration Among Middle School and High School Students-United States*, 2015, 67(3) *Morbidity & Mortality Wkly. Rpt.* 85–90 (Jan. 26, 2018), available at <http://dx.doi.org/10.15585/mmwr.mm6703a1>.



years before the pandemic.<sup>354</sup> Fifty-eight percent of public schools also saw an increase in rowdiness outside of the classroom, 68 percent saw increases in tardiness, 27 percent saw increases in students skipping classes, 55 percent saw increases in the use of electronic devices when not permitted, 37 percent saw an increase in bullying, 39 percent saw an increase in physical fights between students, and 46 percent saw an increase in threats of fights between students.<sup>355</sup>

307. Further exacerbating school's struggle to teach is the fact students are not showing up to school. Indeed, student absenteeism has greatly increased. In the 2021-22 school year, 39 percent of public schools experienced an increase in chronic student absenteeism compared to the 2020-21 school year, and 72 percent of public schools saw increased chronic student absenteeism compared to school years before the pandemic.<sup>356</sup> Following suit, vandalism has increased in 2022, with 36 percent of public schools reporting increased acts of student vandalism on school property.<sup>357</sup>

308. Schools have borne increased costs and expenses in response to the youth mental health crisis. These costs include:

(a) hiring additional mental health personnel (41 percent of public schools added staff to focus on student mental health);<sup>358</sup>

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<sup>354</sup> 2022 *School Pulse Panel*, U.S. Dep't Educ., Inst. Educ. Sci. (2022), available at <https://ies.ed.gov/schoolsurvey/spp/>.

<sup>355</sup> *Id.*

<sup>356</sup> *Id.*

<sup>357</sup> *Id.*

<sup>358</sup> *Id.*

(b) developing additional mental health resources (46 percent of public schools created or expanded mental health programs for students, 27 percent added student classes on social, emotional, and mental health and 25 percent offered guest speakers for students on mental health);<sup>359</sup>

(c) training teachers to help students with their mental health (56 percent of public schools offered professional development to teachers on helping students with mental health);<sup>360</sup>

(d) increasing disciplinary services and hiring additional personnel for disciplinary services in response to increased bullying and harassment over social media;

(e) addressing property damaged as a result of students acting out because of mental, social, and emotional problems Defendants' conduct caused;

(f) diverting time and resources from instruction activities to notify parents and guardians of students' behavioral issues and attendance;

(g) investigating and responding to threats made against schools and students over social media;

(h) updating its student handbook to address use of Defendants' platforms; and

(i) updating school policies to address use of Defendants' platforms.

#### **F. Impact of Social Media Use on Plaintiff, Berlin Brothersvalley School District**

310. Plaintiff, Berlin Brothersvalley School District has been directly impacted by the mental health crisis among youth in its community.

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<sup>359</sup> *Id.*

<sup>360</sup> *Id.*

311. The increased use of and dependency on social media has led to an increase in the number of Plaintiff's students in crisis, acting out, vandalizing school property, and in need of mental health services.

312. In an attempt to address the decline in students' mental, emotional, and social health, Plaintiff has been forced to divert resources and expend additional resources to:

- (a) hire additional personnel, including counselors and medical professionals to address mental, emotional, and social health issues;
- (b) develop additional resources to address mental, emotional, and social health issues;
- (c) increase training for teachers and staff to identify students exhibiting symptoms affecting their mental, emotional, and social health;
- (d) train teachers, staff, and members of the community about the harms caused by Defendants' wrongful conduct;
- (e) develop lesson plans to teach students about the dangers of using Defendants' platforms;
- (f) educate students about the dangers of using Defendants' platforms;
- (g) update its student handbook to address use of Defendants' platforms; and
- (h) update school policies to address use of Defendants' platforms.

313. Additionally, more students have been acting out as a result of the decline Defendants caused in students mental, emotional, and social health. As a result, Plaintiff has been forced to divert resources and expend additional resources to:

- (a) repair damaged property as a result of the exploitive and harmful content Defendants directed to students;

- (b) increase disciplinary services and time spent addressing bullying, harassment, and threats;
- (c) confiscate devices on which students were compelled by Defendants' conduct to use while in class or school campuses to access Defendants' platforms;
- (d) meet with students and the parents of students caught using Defendants' platforms at school;
- (e) divert time and resources from instruction activities to notify parents and guardians of students' behavioral issues and attendance; and
- (f) investigate and respond to threats made against schools and students over social media.

314. As of the 2022–23 school year, Plaintiff employs and/or contracts for approximately three (3) school counselors, one (1) social worker, one (1) psychologist, and one (1) nurse.

315. But even equipped with these resources, Plaintiff cannot or finds it difficult to keep up with the increased need for mental health services due to the youth mental health crisis.

316. As a result, the rest of Plaintiff's staff must work in overdrive to help students with mental health concerns.

317. Plaintiff requires significantly greater and long-term funding to address the nuisance Defendants have created. It is time, as President Biden declared, to get "all Americans the mental health services they need."<sup>361</sup>

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<sup>361</sup> President Biden, State of the Union Address (Mar. 1, 2022) (transcript available at <https://www.whitehouse.gov/state-of-the-union-2022/>).

**V. THE COMMUNICATIONS DECENCY ACT, 47 U.S.C. § 230(c) EXPRESSLY ALLOWS INTERACTIVE COMPUTER SERVICE COMPANIES LIKE DEFENDANTS TO LIMIT HARMFUL CONTENT, AND THERE IS NOT IMMUNITY FOR DEFENDANTS' CONDUCT**

319. Plaintiff anticipates that Defendants will raise section 230 of the Communications Decency Act, 47 U.S.C. § 230(c)(1), as a shield for their conduct. But section 230 is no shield for Defendants' own acts in designing, marketing, and operating social media platforms that are harmful to youth.

320. Section 230 was enacted by Congress to address the harms associated with certain content and drafted to limit liability for "Good Samaritans" seeking to restrict such harmful content. It is entitled, "Protection for 'Good Samaritan' blocking and screening of offensive material."

321. Section 230 provides immunity from liability only to "(1) a provider or user of an interactive computer service (2) whom a plaintiff seeks to treat, under a state law cause of action, as a publisher or speaker (3) of information provided by another information content provider." *Barnes v. Yahoo!, Inc.*, 570 F.3d 1096, 1100–01 (9th Cir. 2009), as amended (Sept. 28, 2009).

322. Publication generally involves traditional editorial functions, such as reviewing, editing, and deciding whether to publish or to withdraw from publication third-party content. *Lemmon v. Snap, Inc.*, 995 F.3d 1085, 1091 (9th Cir. 2021).

323. Publication does not, however, include duties related to designing and marketing a social media platform. *See id.* at 1092–93.

324. Plaintiff expressly disavows any claims or allegations that attempt to hold Defendants liable as the publisher or speaker of any information provided by third parties.

325. Section 230 does not immunize Defendants' conduct because, among other considerations: (a) Defendants are liable for their own affirmative conduct in recommending and

promoting harmful content to youth; (b) Defendants are liable for their own actions designing and marketing their social media platforms in a way that causes harm; (c) Defendants are liable for the content they create that causes harm; and (d) Defendants are liable for distributing, delivering, and/or transmitting material that they know or have reason to know is harmful, unlawful, and/or tortious.

326. First, Plaintiff is not alleging Defendants are liable for what third-parties have said on Defendants' platforms but, rather, for Defendants' own conduct. As described above, Defendants affirmatively recommend and promote harmful content to minors, such as proanorexia and eating disorder content, and Snapchat filters which promote plastic surgery or body dysmorphia. Recommendation and promotion of damaging material is not a traditional editorial function and seeking to hold Defendants liable for these actions is not seeking to hold them liable as a publisher or speaker of third party-content.

327. Second, Plaintiff's claims arise from Defendants' status as designers and marketers of dangerous social media platforms that have injured the health, comfort, and repose of its community. The nature of Defendants' platforms centers around Defendants' use of algorithms and other design features that encourage users to spend the maximum amount of time on their platforms—not on particular third party content. The algorithms Defendants designed and employ adapt to the social media activity of individual users to promote whatever content will trigger a particular user's attention and maximize their use of the platform, for as long as possible. Defendants' algorithms are user-focused rather than content-based and are indifferent to the nature and type of content they promote to users, provided that such content increases the time users spend on their platforms. In that respect, they are content neutral.

328. Third, Defendants are liable for the content they create. In addition to content such as Snapchat filters which promote body dysmorphia, Defendants send emails and notifications to youth including material they create which often promotes certain harmful content.

329. Fourth, Plaintiff does not seek to hold Defendants liable as publishers or speakers of information provided by other content providers, but instead Plaintiff seeks to hold them liable for distributing material they know or should know is harmful or unlawful. *See Malwarebytes Inc. v. Enigma Software Grp. USA, LLC*, 141 S. Ct. 13 (2020) (statement of Justice Thomas respecting denial of certiorari discussing the distinction between distributor and publisher liability); *cf.* Restatement (Second) of Torts § 581 (Am. Law Inst. 1977) (“[O]ne who only delivers or transmits defamatory matter published by a third person is subject to liability if, but only if, he knows or has reason to know of its defamatory character.”)

330. Plaintiff’s claim is based upon Defendants’ own conduct, which has resulted in the exacerbation of the public health crisis from which Plaintiff’s students are suffering.

## **VI. CAUSES OF ACTION**

### **COUNT ONE: VIOLATIONS OF PUBLIC NUISANCE LAW**

332. Plaintiff incorporates each preceding paragraph as though set forth fully herein.

333. Defendants have created and maintained a public nuisance which proximately caused injury to Plaintiff.

334. Plaintiff, in the operation of its schools, has a right to be free from conduct that endangers their health and safety, and the health and safety of their employees and students. Yet, Defendants have engaged in conduct and omissions which unreasonably and injuriously interfered with the public health and safety in Plaintiff’s community and created substantial and unreasonable annoyance, inconvenience, and injury to the public by their production, promotion, design,

distribution, and marketing of their social media platforms, for use by youth in Plaintiff's schools. Defendants' actions and omissions have substantially, unreasonably, and injuriously interfered with Plaintiff's functions and operations and affected the public health, safety and welfare of Plaintiff's community.

335. Each Defendant has created or assisted in the creation of a condition that is injurious to the health and safety of Plaintiff and its students and interferes with the comfortable enjoyment of life and property of Plaintiff's community.

336. Defendants' conduct has directly caused a severe disruption of public health, order and safety. Defendants' conduct is ongoing and continues to produce permanent and long-lasting damage.

337. This harm to Plaintiff and the public is substantial, unreasonable, widespread and ongoing.

338. Because of the mental health crisis caused by Defendants, Plaintiff's schools can no longer operate, use, or enjoy their property free from injury or interference.

339. Defendants' design, manufacture, production, marketing, and promotion of such addictive, manipulative, and harmful social media platforms, when such actions were taken with the intent to market to, and in fact, were marketed to youth through targeted campaigns, unreasonably interfered with a public right in that the results of Defendants' actions created and maintained a condition dangerous to the public's health, was offensive to community moral standards, or unlawfully obstructed the public in free use of public property. Defendants intentionally created and maintained a public nuisance by, among other acts:

(a) Designing social media platforms that were uniquely youth oriented;



(b) Designing a product that was meant to facilitate use by minors, both generally and in a way that was branded youth friendly;

(c) Failing to sufficiently study and conduct necessary tests to determine whether their platforms were safe for children/minor users;

(d) Creating, producing, maintaining, distributing, managing, marketing, promoting, and delivering their platforms to the general public and to Plaintiff's students without thorough and adequate pre-and post-market testing;

(e) Designing and using algorithms which promote harmful, destructive content to be consumed by the user, regardless of age;

(f) Failing to act on data, reports, analysis, opinions, or information known, or that should have been known in the exercise of reasonable diligence, pertaining to Defendants' platform and the risks and hazards posed to children, adolescents and minors;

(g) Designing their social media platforms to encourage excessive amounts of time that users spend on the platform and causing mental and emotional harm, particularly to children/minors, using manipulative technology such as algorithm-based feeds, IVR and social reciprocity;

(h) Failing to employ adequate safeguards in the creation, maintenance, and operation of their platforms to ensure they would not encourage excessive and harmful use;

(i) Failing to take reasonably adequate steps to prevent their platforms from being promoted, distributed, and used by minors under the age of 13;

(j) Designing, engineering, developing, and maintaining their platforms to appeal to children, adolescents and teens, where such minors lack the same cognitive development as

adults and are particularly vulnerable to social reward-based manipulative tactics such as algorithm-based feeds and social reciprocity;

(k) Failing to disclose to or warn Plaintiff, users, consumers, and the general public of the negative mental and emotional health consequences associated with their platforms and social media generally, especially for children/minors;

(l) Failing to provide reasonably adequate warnings to youth users or the parents or guardians of such minors, where Defendants could reasonably foresee such minors would use their platforms;

(m) Failing to disclose to Plaintiff, Plaintiff's students, and the general public that Defendants' platforms are designed to maximize the time children, adolescents, and teens spend on Defendants' platforms and that such platforms cause negative mental, emotional, and social health consequences, particularly among minors;

(n) Failing to warn Plaintiff, Plaintiff's students, and the public of the true risks of using Defendants' platforms;

(o) Advertising, marketing, and recommending Defendants' platforms while concealing and failing to disclose or warn of the dangers known by Defendants to be associated with, or caused by, minors' use of Defendants' platforms;

(p) Continuing the creation, production, maintenance, distribution, management, marketing, promotion, and delivery of Defendants' platforms with knowledge that Defendants' platforms are unreasonably unsafe, addictive, and dangerous to minors, and otherwise harmful to minors' mental and emotional health;

(q) Failing to change Defendants' algorithms, which are used to recommend content to users, in a manner that would no longer concentrate on maximizing the amount of time

users spend on Defendants' platforms, notwithstanding the reasonably foreseeable mental and emotional safety risks this posed to Defendants' minor users;

(r) Failing to adequately limit Defendants' algorithm-based recommendations to filter out content that exposes youth users to content that is violent, sexual, or encouraging self-harm and other types of harmful content; and

(s) Representing that Defendants' platforms were safe for child, adolescent, and teen users when, in fact, Defendants knew or should have known that the platforms created a clear and present danger for the mental and emotional health of minors.

340. Defendants' conduct substantially and unreasonably interfered with public health, safety and the right to a public education in a safe and healthy environment. In that regard, and in other ways as discussed herein, the public nuisance created or maintained by Defendants was connected to Plaintiff's property, including but not limited to the school buildings.

341. The health and safety of Plaintiff's students and employees, including those who use, have used, or will use Defendants' platforms, as well as those affected by others' use of their platforms, are matters of substantial public interest and of legitimate concern to Plaintiff and Plaintiff's community.

342. Defendants' conduct has affected and continues to affect a substantial number of people within Plaintiff's District and is likely to continue causing significant harm.

343. But for Defendants' actions, Plaintiff's students would not use social media platforms as often or for as long as they do, be deluged with exploitive and harmful content to the same degree, and the public health crisis that currently exists as a result of Defendants' conduct would have been averted.

344. Defendants knew or should have known that their conduct would create a public nuisance. Defendants knew or should have known, that their acts and omissions involved in the development, promotion and use of their platforms would cause students to excessively use their platforms. Defendants knew, or reasonably should have known, that their tactics to encourage user engagement with their platforms were designed to appeal to minors, and that their acts and omissions intended to increase minors' use of their platforms were causing harm to minors in Plaintiff's schools and to Plaintiff itself.

345. Thus, the public nuisance caused by Defendants was reasonably foreseeable, including the financial and economic losses incurred by Plaintiff.

346. Alternatively, each Defendants' conduct was a substantial factor in bringing about the public nuisance as described herein. By designing, marketing, promoting, and operating their platforms in a manner intended to maximize the time youth spend on their respective platforms—despite knowledge of the harms to youth from their wrongful conduct—Defendants directly accelerated and enabled the widespread, excessive, and habitual use of their platforms and the public nuisance affecting Plaintiff. By seeking to capitalize on their success by refining their platforms to increase the time youth spend on their platforms, Defendants directly contributed to the public health crisis and the public nuisance affecting Plaintiff.

347. Defendants' conduct is especially injurious to Plaintiff because, as a direct and proximate cause of Defendants' conduct creating or assisting in the creation of a public nuisance, Plaintiff and its students and employees have sustained and will continue to sustain substantial injuries.

348. Defendants, and each of them, facilitated and permitted the conditions to exist that caused the harms herein mentioned.

349. Defendants directly facilitated the rise of the youth suicide crisis.

350. Plaintiff has attempted to mitigate the harm and disruption caused by Defendants' conduct, including the following:

- (a) Hiring additional personnel to address mental, emotional, and social health crises and security;

- (b) Developing and spending additional resources to address mental, emotional, and social health issues;

- (c) Increasing training for teachers and staff to identify students exhibiting symptoms impacting their mental, emotional, and social health;

- (d) Implementing additional training for teachers, staff, and members of the community about the harms caused by Defendants' wrongful conduct;

- (e) Developing/altering lesson plans to teach students about the dangers of using Defendants' platforms;

- (f) Educating students, staff, and parents about the dangers of using Defendants' platforms;

- (g) Remediating property damaged as a result of students acting out because of mental, social, and emotional problems caused by Defendants' conduct;

- (h) Increasing time and resources spent addressing bullying, harassment, and threats;

- (i) Confiscating electronic devices on which students use Defendants' platforms while in class or on Plaintiff's campus;

- (j) Meeting with students and the parents caught using Defendants' platforms at school or other disciplinary matters related to students' use of Defendants' platforms;

(k) Diverting time and resources from instruction activities to notify parents and guardians of students' behavioral issues and attendance issues caused by use of Defendants' platforms;

(l) Investigating and responding to threats made against Plaintiff's schools and students originating on or because of social media;

(m) Updating student handbook(s) to address use of Defendants' platforms;

(n) Modifying school policies to address use of Defendants' platforms; and

(o) Addressing increased incidence of vandalism, property damage, crime, and increased need for discipline of students caused by use of Defendants' platforms.

351. Fully abating the youth mental health crisis resulting from Defendants' conduct will require much more than these steps.

352. As detailed herein, Plaintiff has suffered special injury, different in kind from those suffered by the general public, including but not limited to, those arising from: discipline and suspensions related to incidents of social media use in Plaintiff's schools have increased at alarming rates; property damage due to "challenges" and other content promoted and spread by Defendants' platforms; Plaintiff has had to closely monitor and stop the use of electronic devices in Plaintiff's schools as to prevent social media being used during a time when students should be learning; Plaintiff has had to divert resources toward the mental health crisis caused by Defendants; Plaintiff has had to change lesson plans and educational courses to mitigate the youth bullying, eating disorders, and suicide content promulgated on defendants' platforms; Plaintiff has had to devote and divert staff resources to conduct staff training on the dangers of social media use; and Plaintiff has had to hire additional school counselors and staff to address the youth mental health crisis caused by widespread use by minors of Defendants' platforms.

353. Plaintiff therefore requests all the relief to which it is entitled in its own right and relating to the special damage or injury it has suffered, and not in any representative or *parens patriae* capacity on behalf of students, including damages in an amount to be determined at trial and an order providing for the abatement of the public nuisance that Defendants have created or assisted in the creation of, and enjoining Defendants from future conduct contributing to the public nuisance described above.

354. Defendants engaged in conduct, as described above, that constituted malice, oppression, or fraud, with intent to cause injury and/or with willful and knowing disregard of the rights or safety of another, being fully aware of the probable dangerous consequences of the conduct and deliberately failing to avoid those consequences.

355. Defendants regularly risk the lives and health of consumers and users of its platforms with full knowledge of the dangers of its platforms. Defendants made conscious decisions not to redesign, alter the platforms, warn, or inform the unsuspecting public, including Plaintiff's students or Plaintiff. Defendants' willful, knowing and reckless conduct, constituting malice, oppression or fraud therefore warrants an award of aggravated or punitive damages.

## **COUNT TWO: NEGLIGENCE**

357. Plaintiff incorporates by reference all preceding paragraphs as though fully set forth herein.

358. Defendants owed Plaintiff a duty to not expose Plaintiff to an unreasonable risk of harm, and to act with reasonable care as a reasonably careful person and/or company would act under the circumstances.

359. At all times relevant herein, Defendants owed a duty to consumers and the general public, including Plaintiff, to exercise reasonable care in the creation, production, maintenance,

distribution, management, marketing, promotion, and delivery of Defendants' social media platforms, including the duty to take all reasonable steps necessary to design, research, market, advertise, promote, operate, and distribute their platforms in a way that is not unreasonably dangerous to users, including minors.

360. At all times relevant herein, Defendants knew or, in the exercise of reasonable care, should have known of the hazards and dangers of their respective social media platforms and specifically, the health hazards their platforms posed to youth in particular, especially prolonged use of such platforms where exposure to harmful content was reasonably foreseeable.

361. At all times relevant herein, Defendants knew or, in the exercise of reasonable care, should have known that use of Defendants' social media platforms by minors would create a dangerous and unreasonable risk of injury to Plaintiff.

362. Defendants also knew, or in the exercise of reasonable care should have known, that users and consumers of Defendants' social media platforms were unaware of the risks associated with the use of Defendants' platforms, or the magnitudes of such risks. These risks include, but are not limited to, the risks of excessive social media use and the risks of the probability that algorithm-based recommendations would expose minor users to content that is violent, sexual, or encourages self-harm, among other types of harmful content, or that mental and emotional illness could result.

363. Defendants, by actions, inactions, representations, and omissions, breached their duty of reasonable care, failed to exercise ordinary care, and failed to act as a reasonably careful person and/or company would act under the circumstances in the creation, production, maintenance, distribution, management, marketing, promotion, and delivery of their social media platforms, in that Defendants' creation, production, maintenance, distribution, management,



marketing, promotion, and delivery social media platforms that Defendants knew or had reason to know would negatively impact the mental health of consumers, particularly minors, and the schools they attend, and failed to prevent or adequately warn of these serious risks and injuries.

364. Despite their knowledge, opportunity, ability, and means to investigate, study, and test their social media platforms, and to provide adequate warnings, Defendants failed to take these actions. Defendants have wrongfully concealed information and have made false and/or misleading statements concerning the safety and use of Defendants' social media platforms.

365. Defendants breached their duty in the following ways, including but not limited to:

(a) Creating, designing, producing, maintaining, distributing, managing, marketing, promoting, and delivering their platforms to the public, Plaintiff, and Plaintiff's students without thorough or adequate pre- and post-market testing/analysis;

(b) Failing to sufficiently study and conduct necessary tests to determine whether or not their platforms were safe for children/minor users;

(c) Failing to use reasonable care in the creation, production, maintenance, distribution, management, marketing, promotion, and delivery of their platforms to avoid exposure to risk and danger, such as excessive usage by children/minors and exposure to harmful content;

(d) Failing to act on data, reports, analysis, opinions, or information known, or that which should have been known in the exercise of reasonable diligence, pertaining to Defendants' platform and the risks and hazards posed to children;

(e) Designing their social media platforms to encourage excessive amounts of time that users spend on their platforms, and causing mental and emotional harm, particularly among children/minors, by way of algorithm-based feeds, IVR, social reciprocity, and reward-based content;

(f) Failing to employ adequate safeguards in the creation, maintenance, and operation of their platforms to ensure they would not encourage excessive and harmful use;

(g) Failing to take reasonably adequate steps to prevent their platforms from being promoted, distributed, and used by minors under the age of 13;

(h) Designing, engineering, developing, and maintaining their platforms to appeal to children, adolescents and teens, where such minors lack the same cognitive development as adults and are particularly vulnerable to social reward-based manipulative tactics like social reciprocity.

(i) Failing to disclose to or warn Plaintiff, users, consumers, and the general public of the negative mental and emotional health consequences associated with their platforms and social media generally, especially for children and minors;

(j) Failing to provide reasonably adequate warnings to child and minor users or the parents of such minors, where Defendants could reasonably foresee such minors would use their platforms;

(k) Failing to disclose to Plaintiff, users, consumers, and the public that Defendants' platforms are designed to maximize the time users, particularly minors, spend on Defendants' platforms and that such platforms cause negative mental, emotional, and social health consequences;

(l) Failing to warn users and the general public, including Plaintiff and students of Plaintiff of the true risks of using Defendants' platforms;

(m) Advertising, marketing, and promoting Defendants' platforms while concealing and failing to disclose or warn of the dangers known by Defendants to be associated with, or caused by, minors' use of Defendants' platforms;

(n) Continuing the creation, production, maintenance, distribution, management, marketing, promotion, and delivery of Defendants' platforms with knowledge that Defendants' platforms are unreasonably unsafe, addictive, and dangerous to children's mental and emotional health;

(o) Failing to change Defendants' algorithms, which are used to suggest content to users in a manner that would no longer concentrate on maximizing the amount of time users spend on Defendants' platforms notwithstanding the reasonably foreseeable mental and emotional safety risks this posed to Defendants' minor/children users;

(p) Failing to adequately limit Defendants' algorithm-based recommendations to filter out content that expose children and minor users to content that is violent, sexual, or encourages self-harm, among other types of harmful content;

(q) Representing that Defendants' platforms were safe for children, adolescent, and teen users when, in fact, Defendants knew or should have known that the platforms presented a clear and present danger for the mental and emotional health of youth; and

(r) Additional failures, acts or omissions as set forth at length herein.

366. Defendants knew or should have known that it was foreseeable that Plaintiff would suffer injuries as a result of Defendants' failure to exercise reasonable care in creating, producing, maintaining, distributing, managing, marketing, promoting, and delivering Defendants' platforms, particularly when Defendants' platforms were intentionally and deliberately designed, maintained, and marketed to maximize the time children/minors spend on Defendants' platforms.

367. The full extent and scale of the injuries caused by the intended usage of Defendants' social media platforms could not be known to Plaintiff.

368. Defendants' negligence was the legal and proximate cause of the injuries, harm, and economic losses that Plaintiff suffered and will continue to suffer. But for Defendants' negligence as described herein, such injuries, harm, and economic losses would not have occurred.

369. The mental health crisis caused by Defendants has caused a major disruptive behavioral crisis in Plaintiff's schools, and Plaintiff has had to take steps to mitigate the harm and disruption caused by Defendants' conduct, including but not limited to:

- (a) Providing training to teachers and staff to recognize and build awareness of Defendants' harmful platforms and the consequences of use of same;

- (b) Hiring additional teachers and staff or contracting with outside entities to alleviate the youth mental health crisis, including mental, emotional, and social harm caused to students and members of the community;

- (c) Modifying lesson plans and implementing additional efforts to raise awareness and educate Plaintiff's students and the community Plaintiff serves regarding Defendants' harmful platforms and related negative consequences;

- (d) Remediating damage to property proximately caused by use of Defendants' platforms;

- (e) Hiring additional staff to mitigate and address students in crisis and/or harmed by use of Defendants' platforms;

- (f) Mitigating distraction and other negative impacts on teaching and inhibiting learning of students proximately caused by Defendants' platforms;

- (g) Identifying and confiscating devices wherein Defendants' platforms are used during school hours and on campus;

(h) Addressing the increasing safety risks related to bullying, threats, and other harmful behaviors proximately caused by Defendants' platforms;

(i) Increasing staffing and resources devoted to alleviating mental, emotional, and social health issues;

(j) Using additional resources to address disciplinary issues and anti-bullying actions;

(k) Amending policies and updating student handbook(s) to address the hazards and disruptions caused by use of Defendants' platforms in school and on campus; and

(l) Addressing and mitigating the increased incidence of vandalism, damaged property, crime, and increased need for student discipline and campus security.

370. Defendants' conduct, as described above, was intended to serve their own interests despite having reason to know and consciously disregarding a substantial risk that their conduct was likely to significantly injure the rights of others, including Plaintiff. Defendants have consciously pursued a course of conduct knowing that it created a substantial risk of significant harm to others, including Plaintiff. Defendants regularly risk the health of consumers and users of their platforms, including minors and children, with full knowledge of the dangers of their platforms. Defendants consciously decided not to redesign, warn, or inform the unsuspecting public, including Plaintiff and Plaintiff's students. Defendants' willful, knowing, and reckless conduct therefore warrants, and Plaintiff seeks, an award of aggravated or punitive damages.

### **COUNT THREE: GROSS NEGLIGENCE**

371. Plaintiff incorporates by reference all preceding paragraphs as though fully set forth herein.

372. Defendants were grossly negligent in designing, manufacturing, supplying, distributing, inspecting (or not inspecting), testing (or not testing), marketing, promoting, advertising, packaging, and/or labeling Defendants' platforms.

373. Defendants owed Plaintiff a duty to not expose Plaintiff to an unreasonable risk of harm and to act with reasonable care as a reasonably careful person and/or company would act under the circumstances.

374. At all times relevant herein, Defendants owed a duty to consumers and the general public, including Plaintiff, to exercise reasonable care in the creation, production, maintenance, distribution, management, marketing, promotion, and delivery of Defendants' social media platforms, including the duty to take all reasonable steps necessary to design, research, market, advertise, promote, operate, and distribute their platforms in a way that is not unreasonably dangerous to consumers and users, including youth.

375. At all times relevant herein, Defendants owed a duty to consumers and the general public, including Plaintiff, to exercise reasonable care in the creation, production, maintenance, distribution, management, marketing, promotion, and delivery of their social media platforms. This included a duty to provide accurate, true, and correct information about the harms and risks of using Defendants' platforms, including the harms and risks to youth. This also included a duty to give accurate and complete warnings about the potential adverse effects of extended use of Defendants' platforms by children/minors, and the dangers and risks from the features of their platforms, such as algorithm-driven harmful content recommendations.

376. At all times relevant herein, Defendants knew or, in the exercise of reasonable care, should have known of the hazards and dangers of their respective social media platforms and

specifically, the health hazards their platforms posed to youth in particular, especially prolonged use of such platforms where exposure to harmful content was likely.

377. Therefore, Defendants, by action and inaction, representation and omission, breached their duty of reasonable care, failed to exercise ordinary care, and failed to act as a reasonably careful person and/or company would act under the circumstances in the creation, production, maintenance, distribution, management, marketing, promotion, and delivery of their social media platforms that Defendants knew or had reason to know would negatively impact the mental health of consumers, particularly youth, and failed to prevent or adequately warn of these risks and injuries.

378. Despite their opportunity, ability, and means to investigate, study, and test their social media platforms and to provide adequate warnings, Defendants failed to take these actions. Defendants have wrongfully concealed information and have made false and/or misleading statements concerning the safety and use of Defendants' platforms.

379. Defendants engaged in willful and/or wanton conduct that lacked any care and amounted to an extreme departure from what a reasonably careful person would do in the same situation to prevent harm to others. Defendants' willful and wanton conduct caused Plaintiff to suffer harm.

380. The willful and wanton conduct of Defendants includes, but is not limited to:

(a) Creating, producing, maintaining, distributing, managing, marketing, promoting, and delivering their platforms to the general public and Plaintiff's students without thorough and adequate pre- and post-market testing;

(b) Failing to sufficiently study and conduct necessary tests to determine whether or not their platforms were safe for children/minor users;

(c) Failing to use reasonable and prudent care in the creation, production, maintenance, distribution, management, marketing, promotion, and delivery of their platforms to avoid exposure to risk and danger, such as excessive usage by youth and exposure to harmful content;

(d) Failing to act on data, reports, analysis, opinions, or information known, or that should have been known in the exercise of reasonable diligence, pertaining to Defendants' platform and the risks and hazards posed to children, adolescents, and teens;

(e) Designing their social media platforms to encourage excessive amounts of time that users spend on their platforms and causing mental and emotional harm, particularly to children/minors, using tactics such as algorithm-based feeds, IVR, and social reciprocity;

(f) Failing to employ adequate safeguards in the creation, maintenance, and operation of their platforms to ensure they would not encourage excessive and harmful use;

(g) Failing to take reasonably adequate steps to prevent their platforms from being promoted, distributed, and used by minors under the age of 13;

(h) Designing engineering, developing, and maintaining their platforms to appeal to children, adolescents, and teens, where such minors lack the same cognitive development as adults and are particularly vulnerable to social reward-based manipulative tactics such as algorithm-based feeds and social reciprocity;

(i) Failing to disclose to or warn Plaintiff, users, consumers, and the general public of the negative mental and emotional health consequences associated with their platforms and social media generally, especially for children/minors;



(j) Failing to provide reasonably adequate warnings to youth users or the parents or guardians of such minors, where Defendants could reasonably foresee such minors would use their platforms;

(k) Failing to disclose to Plaintiff, Plaintiff's students, and the general public that Defendants' platforms are designed to maximize the time children, adolescents, and teens spend on Defendants' platforms and that such platforms cause negative mental, emotional, and social health consequences, particularly among minors;

(l) Failing to warn Plaintiff, Plaintiff's students, and the public of the true risks of using Defendants' platforms;

(m) Advertising, marketing, and recommending Defendants' platforms while concealing and failing to disclose or warn of the dangers known by Defendants to be associated with, or caused by, minors' use of Defendants' platforms;

(n) Continuing the creation, production, maintenance, distribution, management, marketing, promotion, and delivery of Defendants' platforms with knowledge that Defendants' platforms are unreasonably unsafe, addictive, and dangerous to minors, and otherwise harmful to minors' mental and emotional health;

(o) Failing to change Defendants' algorithms, which are used to recommend content to users, in a manner that would no longer concentrate on maximizing the amount of time users spend on Defendants' platforms notwithstanding the reasonably foreseeable mental and emotional safety risks this posed to Defendants' minor users;

(p) Failing to adequately limit Defendants' algorithm-based recommendations to filter out content that exposes youth users to content that is violent, sexual, or encouraging self-harm and other types of harmful content; and

(q) Representing that Defendants' platforms were safe for child, adolescent, and teen users when, in fact, Defendants knew or should have known that the platforms created a clear and present danger for the mental and emotional health of minors.

381. Defendants knew new or should have known that it was foreseeable that Plaintiff would suffer injuries as a result of Defendants' failure to exercise reasonable care in designing, researching, developing, testing, marketing, supplying, promoting, advertising, operating, and distributing Defendants' platforms, particularly when Defendants' platforms were designed, developed, operated and marketed to maximize the time youth spend on Defendants' platforms.

382. Plaintiff did not know the nature and extent of the injuries that could result from the intended use of Defendants' social media platforms by Plaintiff's students.

383. Defendants negligence produced, and was the proximate cause of, the injuries, harm, and economic losses that Plaintiff suffered and will continue to suffer. Such injuries, harm, and economic losses would not have happened without Defendants' negligence as described herein.

384. The mental health crisis caused and/or significantly contributed to by Defendants has caused a major disruptive behavioral situation in Plaintiff's schools, and Plaintiff has had to take steps to mitigate the harm and disruption caused by Defendants' conduct, including the following:

(a) Hiring additional staff and training staff to recognize and build awareness of Defendants' harmful platforms and the harmful consequences of their use;

(b) Hiring additional staff and personnel and contracting with third parties to alleviate the youth mental health crisis, including mental, emotional, and social harm caused to students;

(c) Creating and designing lesson plans to include efforts to build awareness and educate students regarding Defendants' harmful platforms and related negative consequences;

(d) Remediating damage to property proximately caused by use of Defendants' platforms;

(e) Hiring additional staff and spending resources providing training to identify and address students in crisis or otherwise negatively impacted by use of Defendants' platforms;

(f) Mitigating negative impacts to teaching and learning of students proximately caused by Defendants' platforms;

(g) Identifying and confiscating devices wherein Defendants' platforms are used on campus and during class;

(h) Addressing and mitigating safety risks caused by bullying, threats, and other harmful behaviors proximately caused by Defendants' platforms;

(i) Repurposing existing staff and resources to address and mitigate the mental, emotional, and social issues caused by use of Defendants' platforms;

(j) Amending school policy and handbook(s) to address the dangers and disruptions caused by use of Defendants' platforms on campus; and

(k) Addressing the increased incidence of vandalism, property damage, crime, and need for student discipline including detention, truancy, and increased security proximately caused by Defendants' platforms.

385. Defendants breached the duties they owed to Plaintiff and in doing so, were wholly unreasonable. Defendants' conduct, as described above, was intended to serve their own interests despite having reason to know and consciously disregarding a substantial risk that their conduct was likely to significantly injure the rights of others, including Plaintiff. Defendants consciously

pursued a course of conduct knowing that it created a substantial risk of significant harm to others, including Plaintiff and Plaintiff's students.

386. As a foreseeable consequence of Defendants' breaches of their duties, Plaintiff has suffered and will continue to suffer direct and consequential economic and other injuries as a result of dealing with the youth mental health crisis in Plaintiff's schools, as described herein, including but not limited to expending, diverting, and increasing resources to address this crisis.

387. Defendants engaged in conduct, as described above, that constitutes malice, and oppression, with intent to cause injury and/or with willful and knowing disregard of the rights or safety of Plaintiff, being fully aware of the probable dangerous consequences of the conduct and deliberately failing to avoid those consequences.

388. Defendants' conduct constituting malice and oppression was committed by one or more officers, directors, or managing agents of Defendants, who acted on behalf of Defendants; was authorized by one or more officers, directors, or managing agents of Defendants; and was adopted or approved by one or more of such officers, directors, or managing agents after the conduct occurred.

389. Defendants regularly risk the lives and health of minors and other users of their platforms with full knowledge of the dangers of their platforms. Defendants made conscious decisions not to redesign, re-label, warn, or inform the unsuspecting public, including Plaintiff and Plaintiff's students. Defendants' willful, knowing and reckless conduct therefore warrants, and Plaintiff seeks, an award of aggravated or punitive damages.

**COUNT FOUR: VIOLATIONS OF THE RACKETEER INFLUENCED AND CORRUPT ORGANIZATIONS ACT ("RICO")**

390. Plaintiff incorporates by reference all preceding paragraphs as if fully set forth herein.

391. This claim is brought by Plaintiff against all Defendants (the “RICO Defendants” for purposes of this Count III and Count IV) for actual damages, treble damages, and equitable relief under 18 U.S.C. § 1964, for violations of RICO, 18 U.S.C. § 1961 *et seq.*

392. Pursuant to RICO, it is “unlawful for any person employed by or associated with any enterprise engaged in, or the activities of which affect, interstate or foreign commerce, to conduct or participate, directly or indirectly, in the conduct of such enterprise’s affairs through a pattern of racketeering activity.” 18 U.S.C. § 1962(c).

393. At all times relevant herein, each RICO Defendant is and has been a “person” within the meaning of 18 U.S.C. § 1961(3), because they are capable of holding, and do hold, “a legal or beneficial interest in property.”

394. Each RICO Defendant conducted the affairs of an enterprise through a pattern of racketeering activity, in violation of 18 U.S.C. § 1962(c), as described herein.

395. The Plaintiff is a “person” within the meaning of 18 U.S.C. § 1961(3), and has standing to sue under 18 U.S.C. § 1964(c) because it was and is injured in its business and/or property “by reason of” the RICO violations described herein.

396. Plaintiff demands all applicable relief as set forth in Plaintiff’s Prayer for Relief.

1. *The Enterprise:*

397. Section 1961(4) defines an enterprise as “any individual, partnership corporation, association, or other legal entity, and any union or group of individuals associated in fact although not a legal entity.” 18 U.S.C. § 1961(4).

398. RICO Defendants form an association-in-fact for the common and continuing purpose described herein and constitute an enterprise within the meaning of 18 U.S.C. § 1961(4) engaged in the conduct of their affairs through a continuing pattern of racketeering activity. The

members of the enterprise functioned as a continuing unit with an ascertainable structure separate and distinct from that of the conduct of the pattern of racketeering activity. There may also be other members of the enterprise who are currently unknown to Plaintiff.

399. Alternatively, each of the RICO Defendants is a corporation, company, or other legal entity, and therefore an enterprise within the meaning of 18 U.S.C § 1961(4).

400. The enterprise functioned as a continuing unit to achieve shared goals through unlawful means, including the following: (1) to preserve and enhance the market for its social media platforms and RICO Defendants' own profits, regardless of the truth, the law, or the health consequences to the American people, including Plaintiff's students and the communities Plaintiff serves; (2) to deceive consumers, especially children, adolescents, and teenagers into using their platforms by falsely maintaining that there is doubt as to whether their platforms are responsible for the apparent mental or emotional health consequences to children, adolescents, and teenagers, despite that RICO Defendants knew otherwise; (3) to deceive consumers, especially children, adolescents, and teenagers, into using their platforms by falsely maintaining that RICO Defendants could mitigate the mental or emotional health consequences to children, adolescents, and teenagers, despite that RICO Defendants knew that these negative consequences were inherent to its platforms' features and technology; (4) to deceive consumers, especially children, adolescents, and teenagers, into becoming or staying addicted to their platforms by maintaining that their platforms were not addictive or that any addictive consequences could be mitigated, despite the fact that RICO defendants knew that their platforms were inherently addictive by design; (5) to deceive consumers, particularly children, adolescents, and teenagers, by claiming that they did not market to children, adolescents, and teenagers, while engaging in marketing and manipulation of their platform algorithms with the intent of causing children, adolescents, and teenagers to engage

in excessive use of their platforms, regardless of the health or safety concerns; and (6) to deceive consumers about the mental and emotional health risks to children, adolescents, and teenagers associated with RICO Defendants' platforms, including that their platforms were intentionally and deliberately designed to target children, adolescents, and teenagers and to encourage excessive and harmful behavior, and that RICO Defendants had the ability to manipulate and did manipulate their platforms to be highly addictive, and that RICO Defendants targeted children, adolescents, and teenagers specifically.

401. The enterprise has pursued a course of conduct of deceit and misrepresentation and conspiracy to make misrepresentations to the public, to withhold from the public facts material to the decision to use or permit children, adolescents, and teenagers to use RICO Defendants' platforms, to promote and maintain sales from RICO Defendants' platforms, and the profits derived therefrom, as well as to shield themselves from public, judicial, and governmental scrutiny.

402. Each enterprise has engaged in, and its activities have affected, foreign and interstate commerce.

*2. Pattern of Racketeering Activity:*

403. RICO Defendants, each of whom are persons associated with, or employed by, the enterprise, did knowingly, willfully, and unlawfully conduct or participate, directly or indirectly in the affairs of the enterprise through a pattern of racketeering activity within the meaning of 18 U.S.C. § 1961(1), 1961(5), and 1962(c). The racketeering activity was made possible by each RICO Defendant's regular and repeated use of the facilities and services of the enterprise. Each RICO Defendant had the specific intent to engage in the substantive RICO violations alleged herein.

404. RICO Defendants controlled the resources and instrumentalities of the enterprise and used that control to perpetrate numerous misleading schemes involving the use of mail and

wires. Foremost, separate and apart from their regular business dealings, RICO Defendants misled and continue to mislead the public on the mental health dangers for youth on their platforms.

405. RICO Defendants had the common purpose of preserving and enhancing the market for their platforms and for youth as consumers for RICO Defendants' own profits, regardless of the truth, the law, or the health consequences to the American people, including Plaintiff's students and the communities Plaintiff serves.

406. RICO Defendants deceived consumers to use RICO Defendants' platforms while concealing and/or suppressing the relevant findings and research. RICO Defendants deceived consumers, particularly parents and children, adolescents, and teenagers, by claiming that they did not market to children, adolescents, and teenagers, while engaging in marketing and manipulation of their platform algorithms with the intent of causing children, adolescents, and teenagers to engage in excessive use of their platforms, regardless of the health or safety concerns.

407. RICO Defendants achieved their common purpose through co-conspirators' actions in deceiving consumers, regulators, and the general public about the dangerous nature of their platforms. Through the enterprise, RICO Defendants engaged in a pattern of racketeering activity consisting of numerous acts of racketeering in the Northern District of California and elsewhere, including mail fraud and wire fraud, indictable offenses under 18 U.S.C. §§ 1341, 1343.

408. RICO Defendants are each an enterprise that is engaged in and affects interstate commerce because the companies sold and continue to sell products across the United States, as alleged herein.

### *3. Predicate Acts: Use of Mail and Wires to Mislead the Public in Violation of 18 U.S.C. §§ 1341, 1343*

409. From a time unknown and continuing until the time of filing of this Complaint, in the Northern District of California and elsewhere, RICO Defendants and others, known and unknown,



did knowingly and intentionally devise and intend to devise a scheme and artifice to mislead, and obtain money and property from, members of the public by means of material false and misleading pretenses, representations, and promises, and omissions of material facts, knowing that the pretenses, representations, and promises, were false when made.

410. It was part of said scheme and artifice that the RICO Defendants would represent that their platforms pose no substantial risk of mental or emotional health concern to children, adolescents, and teenagers, and were not addictive, when in fact, their platforms did pose such risks, and that their platforms were intentionally and deliberately designed to target children, adolescents, and teenagers and encourage excessive and harmful behavior.

411. It was further part of said scheme and artifice that the RICO Defendants and their co-conspirators would and did maintain sales and profits of their platforms, by concealing, and suppressing material information regarding the mental and emotional health risks to children, adolescents, and teenagers associated with their usage, including that their platforms were intentionally and deliberately designed to target children, adolescents, and teenagers and to encourage excessive and harmful behavior, and that they had the ability to manipulate and did manipulate their platforms to be highly addictive, and that RICO Defendants targeted children, adolescents, and teenagers specifically.

412. It was also part of said scheme and artifice that, in order to conceal the health risks of their platforms, RICO Defendants and their co-conspirators would and did make false representations and misleading statements to the public, and would and did falsely represent that Defendants would fund and conduct objective, scientific research, and disclose the results of such research, to resolve concerns about mental and emotional health related issues to youth, and would and did falsely represent that Defendants did not target children, adolescents, and teenagers, and

did suppress and hide adverse research results, did misrepresent and fail to disclose their ability to manipulate and the manipulation of their platforms and their addictive qualities, and would and did misrepresent their actions to government personnel, and others.

413. It was further a part of said scheme and artifice that RICO Defendants and their co-conspirators would and did misrepresent, conceal, and hide and cause to be misrepresented, concealed, and hidden, the purpose of, and acts done in furtherance of, the scheme.

414. It was a further part of said scheme and artifice, and in furtherance thereof, that RICO Defendants would and did communicate with each other and with their co-conspirators and others, in person, by mail, and by telephone and other interstate and foreign wire facilities, regarding the true nature of their platforms and the mental and emotional health risks to children, adolescents, and teenagers.

415. It was further part of said scheme and artifice that RICO Defendants' made communications directed toward government officials and to the public in furtherance of their conspiracy to deceive the public by means of telephone, mail, internet, wire transmissions, and other forms of interstate commerce and communications.

416. For purposes of executing and attempting to execute that scheme and artifice, RICO Defendants and their co-conspirators would and did knowingly transmit and cause to be transmitted in interstate and foreign commerce by means of wire, radio and television communication writings, signs, signals, pictures and sounds (collectively "transmissions") in violation of 18 U.S.C. § 1343.

417. For the purpose of executing and attempting to execute the scheme and artifice described herein, RICO Defendants and their co-conspirators would and did: knowingly place and cause to be placed in any post office or authorized depository for mail matter, matters, and things

to be sent and delivered by the United States Postal Service (and its predecessor, the United States Post Office Department); took and received therefrom such matters and things; and knowingly caused to be delivered by mail according to the direction thereon, and at the place at which it is directed to be delivered by the person to whom it is addressed, any such matter and thing, in violation of 18 U.S.C. § 1341.

**COUNT FIVE: CONSPIRACY TO CONDUCT THE AFFAIRS OF THE ENTERPRISE THROUGH A PATTERN OF RACKETEERING ACTIVITY (18 U.S.C. § 1962)**

418. Plaintiff incorporates the allegations set forth above as if fully set forth herein.

419. From a time unknown and continuing until the time of filing of this Complaint, in the Northern District of California and elsewhere, RICO Defendants and others known and unknown did unlawfully, knowingly and intentionally combine, conspire, confederate, and agree together with each other, and others whose names are both known and unknown, to conduct and participate, directly and indirectly, in the conduct of the affairs of the aforementioned enterprise, which was engaged in the activities of which affected, interstate and foreign commerce, through a pattern of activity consisting of multiple acts indictable under 18 U.S.C. §§ 1341 and 1343, in violation of 18 U.S.C. § 1962(d).

420. Each of the RICO Defendants agreed that at least two acts of racketeering activity would be committed by a member of the conspiracy in furtherance of the conduct of the enterprise. It was part of the conspiracy that RICO Defendants and their co-conspirators would commit numerous acts of racketeering activity in the conduct of the affairs of the enterprise, including but not limited to, acts of racketeering set forth below.

421. From a time unknown and continuing until the time of filing of this Complaint, in the Northern District of California and elsewhere, RICO Defendants and others known and unknown did knowingly and intentionally devise and intend to devise a scheme and artifice to

mislead, and obtain money and property from, members of the public by means of material false and mislead pretenses, representations, and promises, and omissions of material facts, knowing that the pretenses, representations, and promises, were false when made.

422. It was part of said scheme and artifice that the RICO Defendants would represent that their platforms pose no substantial risk of mental or emotional health concern to children, adolescents, and teenagers, and were not addictive, when in fact, their platforms did pose such risks, and that their platforms were intentionally and deliberately designed to target children, adolescents, and teenagers and encourage excessive and harmful behavior.

423. It was further part of said scheme and artifice that RICO Defendants and their co-conspirators would and did maintain sales and profits of their platforms, by concealing, and suppressing material information regarding the mental and emotional health risks to children, adolescents, and teenagers associated with their usage, including that their platforms were intentionally and deliberately designed to target children, adolescents, and teenagers and to encourage excessive and harmful behavior, and that they had the ability to manipulate and did manipulate their platforms to be highly addictive, and that RICO Defendants targeted children, adolescents, and teenagers specifically.

424. It was further part of said scheme and artifice that, in order to conceal the health risks of their platforms, RICO Defendants and their co-conspirators would and did make false representations and misleading statements to the public; would and did falsely represent that Defendants would fund and conduct objective, scientific research, and disclose the results of such research, to resolve concerns about mental and emotional health related issues to youth; would and did falsely represent that Defendants did not target children, adolescents, and teenagers; would and did suppress and hide adverse research results; would and did misrepresent and fail to disclose

their ability to manipulate and the manipulation of their platforms and their addictive qualities; and would and did misrepresent their actions to government personnel and others.

425. It was a further part of said scheme and artifice that RICO Defendants and their co-conspirators would and did misrepresent, conceal, and hide and cause to be misrepresented, concealed, and hidden, the purpose of, and acts done in furtherance of, the scheme.

426. It was a further part of said scheme and artifice, and in furtherance thereof, that RICO Defendants would and did communicate with each other and with their co-conspirators and others, in person, by mail, and by telephone and other interstate and foreign wire facilities, regarding the true nature of their platforms and the mental and emotional health risks to children, adolescents, and teenagers.

427. It was further part of said scheme and artifice that RICO Defendants' made communications directed toward government officials and to the public in furtherance of their conspiracy to deceive the public by means of telephone, mail, internet, wire transmissions, and other forms of interstate commerce and communications.

428. For purposes of executing and attempting to execute that scheme and artifice, RICO Defendants and their co-conspirators would and did knowingly transmit and cause to be transmitted in interstate and foreign commerce by means of wire, radio and television communication writings, signs, signals, pictures and sounds (hereinafter "transmissions") in violation of 18 U.S.C. § 1343.

429. For the purpose of executing and attempting to execute the scheme and artifice herein described, RICO Defendants and their co-conspirators would and did: knowingly place and cause to be placed in any post office or authorized depository for mail matter, matters and things to be sent and delivered by the United States Postal Service (and its predecessor, the United States

Post Office Department); took and received therefrom such matters and things; and knowingly caused to be delivered by mail according to the direction thereon, and at the place at which it is directed to be delivered by the person to whom it is addressed, any such matter and thing, in violation of 18 U.S.C. § 1341.

## **VII. PRAYER FOR RELIEF**

WHEREFORE, Plaintiff prays for judgment as follows:

1. Entering an Order that the conduct alleged herein constitutes a public nuisance under Pennsylvania and California law;
2. Entering an Order that Defendants are jointly and severally liable;
3. Entering an Order requiring Defendants to abate the public nuisance described herein and to deter and/or prevent the resumption of such nuisance;
4. Enjoining Defendants from engaging in further actions causing or contributing to the public nuisance as described herein;
5. Awarding equitable relief to fund prevention education and treatment for excessive and problematic use of social media;
6. Awarding actual and compensatory damages;
7. Awarding statutory damages in the maximum amount permitted by law;
8. Awarding reasonable attorneys' fees and costs of suit;
9. Awarding pre-judgment and post-judgment interest; and
10. Such other and further relief as the Court deems just and proper under the circumstances.

### VIII. JURY TRIAL DEMAND

Plaintiff hereby demands a trial by jury.

DATED: May 22, 2023

Respectfully Submitted,

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